



### Sequence Listing

<120> COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND TREATMENT OF TUMOR

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<212> DNA

<213> Homo sapien

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<213> Homo sapien

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<213> Homo sapien

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<212> DNA  
<213> Homo sapien

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<213> Homo sapien

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<223> Unknown base

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Gly Leu Val Thr Tyr Asn Ile Val Asp	Gly Asp Gly Met Glu	Ser
305	310	315
Phe Glu Ile Thr Thr Asp Tyr Glu Thr	Gln Glu Gly Val Ile	Lys
320	325	330
Leu Lys Lys Pro Val Asp Phe Glu Thr	Glu Arg Ala Tyr Ser	Leu
335	340	345
Lys Val Glu Ala Ala Asn Val His Ile	Asp Pro Lys Phe Ile	Ser
350	355	360
Ash Gly Pro Phe Lys Asp Thr Val Thr	Val Lys Ile Ser Val	Glu
365	370	375
Asp Ala Asp Glu Pro Pro Met Phe	Leu Ala Pro Ser Tyr Ile	His
380	385	390
Glu Val Gln Glu Asn Ala Ala Ala	Gly Thr Val Val Gly Arg	Val
395	400	405
His Ala Lys Asp Pro Asp Ala Ala Asn	Ser Pro Ile Arg Tyr	Ser
410	415	420
Ile Asp Arg His Thr Asp Leu Asp Arg	Phe Phe Thr Ile Asn	Pro
425	430	435
Glu Asp Gly Phe Ile Lys Thr Thr Lys	Pro Leu Asp Arg Glu	Glu
440	445	450
Thr Ala Trp Leu Asn Ile Thr Val Phe	Ala Ala Glu Ile His	Asn
455	460	465
Arg His Gln Glu Ala Gln Val Pro Val	Ala Ile Arg Val Leu	Asp
470	475	480
Val Asn Asp Asn Ala Pro Lys Phe	Ala Ala Pro Tyr Glu	Gly Phe
485	490	495
Ile Cys Glu Ser Asp Gln Thr Lys Pro	Leu Ser Asn Gln Pro	Ile
500	505	510
Val Thr Ile Ser Ala Asp Asp Lys Asp	Asp Thr Ala Asn Gly	Pro
515	520	525
Arg Phe Ile Phe Ser Leu Pro Pro Glu	Ile Ile His Asn Pro	Asn
530	535	540
Phe Thr Val Arg Asp Asn Arg Asp Asn	Thr Ala Gly Val Tyr	Ala
545	550	555
Arg Arg Gly Gly Phe Ser Arg Gln Lys	Gln Asp Leu Tyr Leu	Leu
560	565	570
Pro Ile Val Ile Ser Asp Gly Gly Ile	Pro Pro Met Ser Ser	Thr
575	580	585

Asn	Thr	Leu	Thr	Ile	Lys	Val	Cys	Gly	Cys	Asp	Val	Asn	Gly	Ala
590														600
Leu	Leu	Ser	Cys	Asn	Ala	Glu	Ala	Tyr	Ile	Leu	Asn	Ala	Gly	Leu
605														615
Ser	Thr	Gly	Ala	Leu	Ile	Ala	Ile	Leu	Ala	Cys	Ile	Val	Ile	Leu
620														630
Leu	Val	Ile	Val	Val	Leu	Phe	Val	Thr	Leu	Arg	Arg	Gln	Lys	Lys
635									640					645
Glu	Pro	Leu	Ile	Val	Phe	Glu	Glu	Glu	Asp	Val	Arg	Glu	Asn	Ile
650									655					660
Ile	Thr	Tyr	Asp	Asp	Glu	Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	
665									670					675
Phe	Asp	Ile	Ala	Thr	Leu	Gln	Asn	Pro	Asp	Gly	Ile	Asn	Gly	Phe
680									685					690
Ile	Pro	Arg	Lys	Asp	Ile	Lys	Pro	Glu	Tyr	Gln	Tyr	Met	Pro	Arg
695									700					705
Pro	Gly	Leu	Arg	Pro	Ala	Pro	Asn	Ser	Val	Asp	Val	Asp	Asp	Phe
710									715					720
Ile	Asn	Thr	Arg	Ile	Gln	Glu	Ala	Asp	Asn	Asp	Pro	Thr	Ala	Pro
725									730					735
Pro	Tyr	Asp	Ser	Ile	Gln	Ile	Tyr	Gly	Tyr	Glu	Gly	Arg	Gly	Ser
740									745					750
Val	Ala	Gly	Ser	Leu	Ser	Ser	Leu	Glu	Ser	Ala	Thr	Thr	Asp	Ser
755									760					765
Asp	Leu	Asp	Tyr	Asp	Tyr	Leu	Gln	Asn	Trp	Gly	Pro	Arg	Phe	Lys
770									775					780
Lys	Leu	Ala	Asp	Leu	Tyr	Gly	Ser	Lys	Asp	Thr	Phe	Asp	Asp	Asp
785									790					795
Ser														

<210> 23  
 <211> 215  
 <212> PRT  
 <213> Homo sapien

<400> 23  
 Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Gly  
 1 5 10 15

Ile Gln Leu Thr Ala Leu Trp Pro Ile Ala Ala Val Glu Ile Tyr  
 20 25 30

Thr Ser Arg Val Leu Glu Ala Val Asn Gly Thr Asp Ala Arg Leu

35	40	45
Lys Cys Thr Phe Ser Ser Phe Ala Pro Val Gly Asp Ala Leu Thr		
50	55	60
Val Thr Trp Asn Phe Arg Pro Leu Asp Gly Gly Pro Glu Gln Phe		
65	70	75
Val Phe Tyr Tyr His Ile Asp Pro Phe Gln Pro Met Ser Gly Arg		
80	85	90
Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp		
95	100	105
Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr		
110	115	120
Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile		
125	130	135
Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu		
140	145	150
Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met		
155	160	165
Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys		
170	175	180
Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser		
185	190	195
Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr		
200	205	210
Leu Glu Asp Thr Asp		
215		
<210> 24		
<211> 796		
<212> PRT		
<213> Homo sapien		
<400> 24		
Met Lys Glu Asn Tyr Cys Leu Gln Ala Ala Leu Val Cys Leu Gly		
1	5	10
Met Leu Cys His Ser His Ala Phe Ala Pro Glu Arg Arg Gly His		
20	25	30
Leu Arg Pro Ser Phe His Gly His His Glu Lys Gly Lys Glu Gly		
35	40	45
Gln Val Leu Gln Arg Ser Lys Arg Gly Trp Val Trp Asn Gln Phe		
50	55	60
Phe Val Ile Glu Glu Tyr Thr Gly Pro Asp Pro Val Leu Val Gly		
65	70	75

Arg Leu His Ser Asp Ile Asp Ser Gly Asp Gly Asn Ile Lys Tyr  
 80 85 90  
 Ile Leu Ser Gly Glu Gly Ala Gly Thr Ile Phe Val Ile Asp Asp  
 95 100 105  
 Lys Ser Gly Asn Ile His Ala Thr Lys Thr Leu Asp Arg Glu Glu  
 110 115 120  
 Arg Ala Gln Tyr Thr Leu Met Ala Gln Ala Val Asp Arg Asp Thr  
 125 130 135  
 Asn Arg Pro Leu Glu Pro Pro Ser Glu Phe Ile Val Lys Val Gln  
 140 145 150  
 Asp Ile Asn Asp Asn Pro Pro Glu Phe Leu His Glu Thr Tyr His  
 155 160 165  
 Ala Asn Val Pro Glu Arg Ser Asn Val Gly Thr Ser Val Ile Gln  
 170 175 180  
 Val Thr Ala Ser Asp Ala Asp Asp Pro Thr Tyr Gly Asn Ser Ala  
 185 190 195  
 Lys Leu Val Tyr Ser Ile Leu Glu Gly Gln Pro Tyr Phe Ser Val  
 200 205 210  
 Glu Ala Gln Thr Gly Ile Ile Arg Thr Ala Leu Pro Asn Met Asp  
 215 220 225  
 Arg Glu Ala Lys Glu Glu Tyr His Val Val Ile Gln Ala Lys Asp  
 230 235 240  
 Met Gly His Met Gly Gly Leu Ser Gly Thr Thr Lys Val Thr  
 245 250 255  
 Ile Thr Leu Thr Asp Val Asn Asp Asn Pro Pro Lys Phe Pro Gln  
 260 265 270  
 Arg Leu Tyr Gln Met Ser Val Ser Glu Ala Ala Val Pro Gly Glu  
 275 280 285  
 Glu Val Gly Arg Val Lys Ala Lys Asp Pro Asp Ile Gly Glu Asn  
 290 295 300  
 Gly Leu Val Thr Tyr Asn Ile Val Asp Gly Asp Gly Met Glu Ser  
 305 310 315  
 Phe Glu Ile Thr Thr Asp Tyr Glu Thr Gln Glu Gly Val Ile Lys  
 320 325 330  
 Leu Lys Lys Pro Val Asp Phe Glu Thr Glu Arg Ala Tyr Ser Leu  
 335 340 345  
 Lys Val Glu Ala Ala Asn Val His Ile Asp Pro Lys Phe Ile Ser  
 350 355 360  
 Asn Gly Pro Phe Lys Asp Thr Val Thr Val Lys Ile Ser Val Glu

365	370	375
Asp Ala Asp Glu Pro Pro Met Phe Leu Ala Pro Ser Tyr Ile His		
380	385	390
Glu Val Gln Glu Asn Ala Ala Ala Gly Thr Val Val Gly Arg Val		
395	400	405
His Ala Lys Asp Pro Asp Ala Ala Asn Ser Pro Ile Arg Tyr Ser		
410	415	420
Ile Asp Arg His Thr Asp Leu Asp Arg Phe Phe Thr Ile Asn Pro		
425	430	435
Glu Asp Gly Phe Ile Lys Thr Thr Lys Pro Leu Asp Arg Glu Glu		
440	445	450
Thr Ala Trp Leu Asn Ile Thr Val Phe Ala Ala Glu Ile His Asn		
455	460	465
Arg His Gln Glu Ala Gln Val Pro Val Ala Ile Arg Val Leu Asp		
470	475	480
Val Asn Asp Asn Ala Pro Lys Phe Ala Ala Pro Tyr Glu Gly Phe		
485	490	495
Ile Cys Glu Ser Asp Gln Thr Lys Pro Leu Ser Asn Gln Pro Ile		
500	505	510
Val Thr Ile Ser Ala Asp Asp Lys Asp Asp Thr Ala Asn Gly Pro		
515	520	525
Arg Phe Ile Phe Ser Leu Pro Pro Glu Ile Ile His Asn Pro Asn		
530	535	540
Phe Thr Val Arg Asp Asn Arg Asp Asn Thr Ala Gly Val Tyr Ala		
545	550	555
Arg Arg Gly Gly Phe Ser Arg Gln Lys Gln Asp Leu Tyr Leu Leu		
560	565	570
Pro Ile Val Ile Ser Asp Gly Gly Ile Pro Pro Met Ser Ser Thr		
575	580	585
Asn Thr Leu Thr Ile Lys Val Cys Gly Cys Asp Val Asn Gly Ala		
590	595	600
Leu Leu Ser Cys Asn Ala Glu Ala Tyr Ile Leu Asn Ala Gly Leu		
605	610	615
Ser Thr Gly Ala Leu Ile Ala Ile Leu Ala Cys Ile Val Ile Leu		
620	625	630
Leu Val Ile Val Val Leu Phe Val Thr Leu Arg Arg Gln Lys Lys		
635	640	645
Glu Pro Leu Ile Val Phe Glu Glu Asp Val Arg Glu Asn Ile		
650	655	660

Ile	Thr	Tyr	Asp	Asp	Glu	Gly	Gly	Gly	Glu	Asp	Thr	Glu	Ala	
665									670			675		
Phe	Asp	Ile	Ala	Thr	Leu	Gln	Asn	Pro	Asp	Gly	Ile	Asn	Gly	Phe
680									685			690		
Ile	Pro	Arg	Lys	Asp	Ile	Lys	Pro	Glu	Tyr	Gln	Tyr	Met	Pro	Arg
695									700			705		
Pro	Gly	Leu	Arg	Pro	Ala	Pro	Asn	Ser	Val	Asp	Val	Asp	Asp	Phe
710									715			720		
Ile	Asn	Thr	Arg	Ile	Gln	Glu	Ala	Asp	Asn	Asp	Pro	Thr	Ala	Pro
725									730			735		
Pro	Tyr	Asp	Ser	Ile	Gln	Ile	Tyr	Gly	Tyr	Glu	Gly	Arg	Gly	Ser
740									745			750		
Val	Ala	Gly	Ser	Leu	Ser	Ser	Leu	Glu	Ser	Ala	Thr	Thr	Asp	Ser
755									760			765		
Asp	Leu	Asp	Tyr	Asp	Tyr	Leu	Gln	Asn	Trp	Gly	Pro	Arg	Phe	Lys
770									775			780		
Lys	Leu	Ala	Asp	Leu	Tyr	Gly	Ser	Lys	Asp	Thr	Phe	Asp	Asp	Asp
785									790			795		

Ser

<210> 25  
 <211> 123  
 <212> PRT  
 <213> Homo sapien

<400> 25														
Met	Ala	Thr	Ala	Ala	Gly	Ala	Thr	Tyr	Phe	Gln	Arg	Gly	Ser	Leu
1				5						10				15
Phe	Trp	Phe	Thr	Val	Ile	Thr	Leu	Ser	Phe	Gly	Tyr	Tyr	Thr	Trp
				20					25				30	
Val	Val	Phe	Trp	Pro	Gln	Ser	Ile	Pro	Tyr	Gln	Asn	Leu	Gly	Pro
				35					40				45	
Leu	Gly	Pro	Phe	Thr	Gln	Tyr	Leu	Val	Asp	His	His	His	Thr	Leu
				50					55				60	
Leu	Cys	Asn	Gly	Tyr	Trp	Leu	Ala	Trp	Leu	Ile	His	Val	Gly	Glu
				65					70				75	
Ser	Leu	Tyr	Ala	Ile	Ala	Leu	Cys	Lys	His	Lys	Gly	Ile	Thr	Ser
				80					85				90	
Gly	Arg	Ala	Gln	Leu	Leu	Trp	Phe	Leu	Gln	Thr	Phe	Phe	Phe	Gly
				95					100				105	
Ile	Ala	Ser	Leu	Thr	Ile	Leu	Ile	Ala	Tyr	Lys	Arg	Lys	Arg	Gln

110

115

120

Lys Gln Thr

&lt;210&gt; 26

&lt;211&gt; 257

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 26

Met Ala Ser Lys Ile Gly Ser Arg Arg Trp Met Leu Gln Leu Ile  
1 5 10 15Met Gln Leu Gly Ser Val Leu Leu Thr Arg Cys Pro Phe Trp Gly  
20 25 30Cys Phe Ser Gln Leu Met Leu Tyr Ala Glu Arg Ala Glu Ala Arg  
35 40 45Arg Lys Pro Asp Ile Pro Val Pro Tyr Leu Tyr Phe Asp Met Gly  
50 55 60Ala Ala Val Leu Cys Ala Ser Phe Met Ser Phe Gly Val Lys Arg  
65 70 75Arg Trp Phe Ala Leu Gly Ala Ala Leu Gln Leu Ala Ile Ser Thr  
80 85 90Tyr Ala Ala Tyr Ile Gly Gly Tyr Val His Tyr Gly Asp Trp Leu  
95 100 105Lys Val Arg Met Tyr Ser Arg Thr Val Ala Ile Ile Gly Gly Phe  
110 115 120Leu Val Leu Ala Ser Gly Ala Gly Glu Leu Tyr Arg Arg Lys Pro  
125 130 135Arg Ser Arg Ser Leu Gln Ser Thr Gly Gln Val Phe Leu Gly Ile  
140 145 150Tyr Leu Ile Cys Val Ala Tyr Ser Leu Gln His Ser Lys Glu Asp  
155 160 165Arg Leu Ala Tyr Leu Asn His Leu Pro Gly Gly Glu Leu Met Ile  
170 175 180Gln Leu Phe Phe Val Leu Tyr Gly Ile Leu Ala Leu Ala Phe Leu  
185 190 195Ser Gly Tyr Tyr Val Thr Leu Ala Ala Gln Ile Leu Ala Val Leu  
200 205 210Leu Pro Pro Val Met Leu Leu Ile Asp Gly Asn Val Ala Tyr Trp  
215 220 225His Asn Thr Arg Arg Val Glu Phe Trp Asn Gln Met Lys Leu Leu  
230 235 240

Gly Glu Ser Val Gly Ile Phe Gly Thr Ala Val Ile Leu Ala Thr  
245 250 255

Asp Gly

<210> 27  
<211> 460  
<212> PRT  
<213> Homo sapien

<220>  
<221> Unsure  
<222> 381  
<223> Unknown amino acid

<400> 27  
Gly Arg Gly Ser Pro Leu Ala Leu Leu Ile Arg Met Lys Thr Leu  
1 5 10 15

Leu Phe Gly Val Trp Ala Leu Leu Ala Leu Ile Leu Cys Pro Gly  
20 25 30

Val Pro Glu Glu Leu Phe Glu Val Ser Ile Trp Pro Ser Gln Ala  
35 40 45

Leu Val Glu Phe Gly Gln Ser Leu Val Cys Asn Cys Ser Thr Thr  
50 55 60

Cys Pro Asp Pro Gly Pro Ser Gly Ile Glu Thr Phe Leu Lys Lys  
65 70 75

Thr Gln Val Asp Lys Gly Pro Gln Trp Lys Glu Phe Leu Leu Glu  
80 85 90

Asp Val Thr Glu Asn Ser Ile Leu Gln Cys Phe Phe Ser Cys Ala  
95 100 105

Gly Ile Gln Lys Asp Thr Ser Leu Gly Ile Thr Val Tyr Gln Pro  
110 115 120

Pro Glu Gln Val Ile Leu Glu Leu Gln Pro Ala Trp Val Ala Val  
125 130 135

Asp Glu Ala Phe Thr Val Lys Cys His Val Pro Ser Val Ala Pro  
140 145 150

Leu Glu Ser Leu Thr Leu Ala Leu Leu Gln Gly Asn Gln Glu Leu  
155 160 165

His Arg Lys Asn Phe Thr Ser Leu Ala Val Ala Ser Gln Arg Ala  
170 175 180

Glu Val Ile Ile Ser Val Arg Ala Gln Lys Glu Asn Asp Arg Cys  
185 190 195

Asn Ser Ser Cys His Ala Glu Leu Asp Leu Ser Leu Gln Gly Gly  
200 205 210

Arg Leu Phe Gln Gly Ser Ser Pro Ile Arg Ile Val Arg Ile Phe  
 215 220 225  
 Glu Phe Ser Gln Ser Pro His Ile Trp Val Ser Ser Leu Leu Glu  
 230 235 240  
 Ala Gly Met Ala Glu Thr Val Ser Cys Glu Val Ala Arg Val Phe  
 245 250 255  
 Pro Ala Lys Glu Val Met Phe His Met Phe Leu Glu Asp Gln Glu  
 260 265 270  
 Leu Ser Ser Ser Leu Ser Trp Glu Gly Asp Thr Ala Trp Ala Asn  
 275 280 285  
 Ala Thr Ile Arg Thr Met Glu Ala Gly Asp Gln Glu Leu Ser Cys  
 290 295 300  
 Phe Ala Ser Leu Gly Ala Met Glu Gln Lys Thr Arg Lys Leu Val  
 305 310 315  
 His Ser Tyr Ser Phe Pro Pro Pro Ile Leu Glu Leu Lys Glu Ser  
 320 325 330  
 Tyr Pro Leu Ala Gly Thr Asp Ile Asn Val Thr Cys Ser Gly His  
 335 340 345  
 Val Leu Thr Ser Pro Ser Pro Thr Leu Arg Leu Gln Gly Ala Pro  
 350 355 360  
 Asp Leu Pro Ala Gly Glu Pro Ala Trp Leu Leu Leu Thr Ala Arg  
 365 370 375  
 Glu Glu Asp Asp Gly Xaa Asn Phe Ser Cys Glu Ala Ser Leu Val  
 380 385 390  
 Val Gln Gly Gln Arg Leu Met Lys Thr Thr Val Ile Gln Leu His  
 395 400 405  
 Ile Leu Lys Pro Gln Leu Glu Glu Ser Ser Cys Pro Gly Lys Gln  
 410 415 420  
 Thr Trp Leu Glu Gly Met Glu His Thr Leu Ala Cys Val Pro Lys  
 425 430 435  
 Gly Asn Pro Ala Pro Ala Leu Val Cys Thr Trp Asn Gly Val Val  
 440 445 450  
 Phe Asp Leu Glu Val Pro Gln Lys Ala Thr  
 455 460

<210> 28  
 <211> 332  
 <212> PRT  
 <213> Homo sapien

<400> 28  
 Met Leu Pro Arg Leu Leu Leu Ile Cys Ala Pro Leu Cys Glu

1	5	10	15
Pro Ala Glu Leu Phe Leu Ile Ala Ser	Pro Ser His Pro Thr Glu		
20	25	30	
Gly Ser Pro Val Thr Leu Thr Cys Lys	Met Pro Phe Leu Gln Ser		
35	40	45	
Ser Asp Ala Gln Phe Gln Phe Cys Phe	Arg Asp Thr Arg Ala		
50	55	60	
Leu Gly Pro Gly Trp Ser Ser Ser Pro	Lys Leu Gln Ile Ala Ala		
65	70	75	
Met Trp Lys Glu Asp Thr Gly Ser Tyr	Trp Cys Glu Ala Gln Thr		
80	85	90	
Met Ala Ser Lys Val Leu Arg Ser Arg	Arg Ser Gln Ile Asn Val		
95	100	105	
His Ile Pro Val Ser Arg Pro Ile Leu	Met Leu Arg Ala Pro Arg		
110	115	120	
Ala Gln Ala Ala Val Glu Asp Val Leu	Glu Leu His Cys Glu Ala		
125	130	135	
Leu Arg Gly Ser Pro Pro Ile Leu Tyr	Trp Phe Tyr His Glu Asp		
140	145	150	
Ile Thr Leu Gly Ser Arg Ser Ala Pro	Ser Gly Gly Gly Ala Ser		
155	160	165	
Phe Asn Leu Ser Leu Thr Glu Glu His	Ser Gly Asn Tyr Ser Cys		
170	175	180	
Glu Ala Asn Asn Gly Leu Gly Ala Gln	Arg Ser Glu Ala Val Thr		
185	190	195	
Leu Asn Phe Thr Val Pro Thr Gly Ala	Arg Ser Asn His Leu Thr		
200	205	210	
Ser Gly Val Ile Glu Gly Leu Leu Ser	Thr Leu Gly Pro Ala Thr		
215	220	225	
Val Ala Leu Leu Phe Cys Tyr Gly Leu	Lys Arg Lys Ile Gly Arg		
230	235	240	
Arg Ser Ala Arg Asp Pro Leu Arg Ser	Leu Pro Ala Leu Pro Gln		
245	250	255	
Glu Phe Thr Tyr Leu Asn Ser Pro Thr	Pro Gly Gln Leu Gln Pro		
260	265	270	
Ile Tyr Glu Asn Val Asn Val Val Ser	Gly Asp Glu Val Tyr Ser		
275	280	285	
Leu Ala Tyr Tyr Asn Gln Pro Glu Gln	Glu Ser Val Ala Ala Glu		
290	295	300	

Thr Leu Gly Thr His Met Glu Asp Lys Val Ser Leu Asp Ile Tyr  
305 310 315

Ser Arg Leu Arg Lys Ala Asn Ile Thr Asp Val Asp Tyr Glu Asp  
320 325 330

Ala Met

<210> 29  
<211> 515  
<212> PRT  
<213> Homo sapien

<400> 29  
Met Leu Leu Trp Ala Ser Leu Leu Ala Phe Ala Pro Val Cys Gly  
1 5 10 15

Gln Ser Ala Ala Ala His Lys Pro Val Ile Ser Val His Pro Pro  
20 25 30

Trp Thr Thr Phe Phe Lys Gly Glu Arg Val Thr Leu Thr Cys Asn  
35 40 45

Gly Phe Gln Phe Tyr Ala Thr Glu Lys Thr Thr Trp Tyr His Arg  
50 55 60

His Tyr Trp Gly Glu Lys Leu Thr Leu Thr Pro Gly Asn Thr Leu  
65 70 75

Glu Val Arg Glu Ser Gly Leu Tyr Arg Cys Gln Ala Arg Gly Ser  
80 85 90

Pro Arg Ser Asn Pro Val Arg Leu Leu Phe Ser Ser Asp Ser Leu  
95 100 105

Ile Leu Gln Ala Pro Tyr Ser Val Phe Glu Gly Asp Thr Leu Val  
110 115 120

Leu Arg Cys His Arg Arg Lys Glu Lys Leu Thr Ala Val Lys  
125 130 135

Tyr Thr Trp Asn Gly Asn Ile Leu Ser Ile Ser Asn Lys Ser Trp  
140 145 150

Asp Leu Leu Ile Pro Gln Ala Ser Ser Asn Asn Asn Gly Asn Tyr  
155 160 165

Arg Cys Ile Gly Tyr Gly Asp Glu Asn Asp Val Phe Arg Ser Asn  
170 175 180

Phe Lys Ile Ile Lys Ile Gln Glu Leu Phe Pro His Pro Glu Leu  
185 190 195

Lys Ala Thr Asp Ser Gln Pro Thr Glu Gly Asn Ser Val Asn Leu  
200 205 210

Ser Cys Glu Thr Gln Leu Pro Pro Glu Arg Ser Asp Thr Pro Leu

215	220	225
His Phe Asn Phe Phe Arg Asp Gly Glu Val Ile Leu Ser Asp Trp		
230	235	240
Ser Thr Tyr Pro Glu Leu Gln Leu Pro Thr Val Trp Arg Glu Asn		
245	250	255
Ser Gly Ser Tyr Trp Cys Gly Ala Glu Thr Val Arg Gly Asn Ile		
260	265	270
His Lys His Ser Pro Ser Leu Gln Ile His Val Gln Arg Ile Pro		
275	280	285
Val Ser Gly Val Leu Leu Glu Thr Gln Pro Ser Gly Gly Gln Ala		
290	295	300
Val Glu Gly Glu Met Leu Val Leu Val Cys Ser Val Ala Glu Gly		
305	310	315
Thr Gly Asp Thr Thr Phe Ser Trp His Arg Glu Asp Met Gln Glu		
320	325	330
Ser Leu Gly Arg Lys Thr Gln Arg Ser Leu Arg Ala Glu Leu Glu		
335	340	345
Leu Pro Ala Ile Arg Gln Ser His Ala Gly Gly Tyr Tyr Cys Thr		
350	355	360
Ala Asp Asn Ser Tyr Gly Pro Val Gln Ser Met Val Leu Asn Val		
365	370	375
Thr Val Arg Glu Thr Pro Gly Asn Arg Asp Gly Leu Val Ala Ala		
380	385	390
Gly Ala Thr Gly Gly Leu Leu Ser Ala Leu Leu Leu Ala Val Ala		
395	400	405
Leu Leu Phe His Cys Trp Arg Arg Arg Lys Ser Gly Val Gly Phe		
410	415	420
Leu Gly Asp Glu Thr Arg Leu Pro Pro Ala Pro Gly Pro Gly Glu		
425	430	435
Ser Ser His Ser Ile Cys Pro Ala Gln Val Glu Leu Gln Ser Leu		
440	445	450
Tyr Val Asp Val His Pro Lys Lys Gly Asp Leu Val Tyr Ser Glu		
455	460	465
Ile Gln Thr Thr Gln Leu Gly Glu Glu Glu Ala Asn Thr Ser		
470	475	480
Arg Thr Leu Leu Glu Asp Lys Asp Val Ser Val Val Tyr Ser Glu		
485	490	495
Val Lys Thr Gln His Pro Asp Asn Ser Ala Gly Lys Ile Ser Ser		
500	505	510

Lys Asp Glu Glu Ser  
515

<210> 30

<211> 453

<212> PRT

<213> Homo sapien

<400> 30

Met Thr Val Ile Arg Phe Phe Pro Ala Ala Ser Ala Thr Lys Arg  
1 5 10 15

Val Leu Pro Pro Val Leu Arg Val Ser Ser Pro Arg Thr Trp Asn  
20 25 30

Pro Asn Val Pro Glu Ser Pro Arg Ile Pro Ala Pro Arg Leu Pro  
35 40 45

Lys Arg Met Ser Gly Ala Pro Thr Ala Gly Ala Ala Leu Met Leu  
50 55 60

Cys Ala Ala Thr Ala Val Leu Leu Ser Ala Gln Gly Gly Pro Val  
65 70 75

Gln Ser Lys Ser Pro Arg Phe Ala Ser Trp Asp Glu Met Asn Val  
80 85 90

Leu Ala His Gly Leu Leu Gln Leu Gly Gln Gly Leu Arg Glu His  
95 100 105

Ala Glu Arg Thr Arg Ser Gln Leu Ser Ala Leu Glu Arg Arg Leu  
110 115 120

Ser Ala Cys Gly Ser Ala Cys Gln Gly Thr Glu Gly Ser Thr Asp  
125 130 135

Leu Pro Leu Ala Pro Glu Ser Arg Val Asp Pro Glu Val Leu His  
140 145 150

Ser Leu Gln Thr Gln Leu Lys Ala Gln Asn Ser Arg Ile Gln Gln  
155 160 165

Leu Phe His Lys Val Ala Gln Gln Arg His Leu Glu Lys Gln  
170 175 180

His Leu Arg Ile Gln His Leu Gln Ser Gln Phe Gly Leu Leu Asp  
185 190 195

His Lys His Leu Asp His Glu Val Ala Lys Pro Ala Arg Arg Lys  
200 205 210

Arg Leu Pro Glu Met Ala Gln Pro Val Asp Pro Ala His Asn Val  
215 220 225

Ser Arg Leu His Arg Leu Pro Arg Asp Cys Gln Glu Leu Phe Gln  
230 235 240

Val Gly Glu Arg Gln Ser Gly Leu Phe Glu Ile Gln Pro Gln Gly

245	250	255
Ser Pro Pro Phe Leu Val Asn Cys Lys Met Thr Ser Asp Gly Gly		
260	265	270
Trp Thr Val Ile Gln Arg Arg His Asp Gly Ser Val Asp Phe Asn		
275	280	285
Arg Pro Trp Glu Ala Tyr Lys Ala Gly Phe Gly Asp Pro His Gly		
290	295	300
Glu Phe Trp Leu Gly Leu Glu Lys Val His Ser Ile Thr Gly Asp		
305	310	315
Arg Asn Ser Arg Leu Ala Val Gln Leu Arg Asp Trp Asp Gly Asn		
320	325	330
Ala Glu Leu Leu Gln Phe Ser Val His Leu Gly Gly Glu Asp Thr		
335	340	345
Ala Tyr Ser Leu Gln Leu Thr Ala Pro Val Ala Gly Gln Leu Gly		
350	355	360
Ala Thr Thr Val Pro Pro Ser Gly Leu Ser Val Pro Phe Ser Thr		
365	370	375
Trp Asp Gln Asp His Asp Leu Arg Arg Asp Lys Asn Cys Ala Lys		
380	385	390
Ser Leu Ser Gly Gly Trp Trp Phe Gly Thr Cys Ser His Ser Asn		
395	400	405
Leu Asn Gly Gln Tyr Phe Arg Ser Ile Pro Gln Gln Arg Gln Lys		
410	415	420
Leu Lys Lys Gly Ile Phe Trp Lys Thr Trp Arg Gly Arg Tyr Tyr		
425	430	435
Pro Leu Gln Ala Thr Thr Met Leu Ile Gln Pro Met Ala Ala Glu		
440	445	450
Ala Ala Ser		

<210> 31  
 <211> 124  
 <212> PRT  
 <213> Homo sapien

<400> 31  
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly  
 1 5 10 15  
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro  
 20 25 30  
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys  
 35 40 45

Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg  
50 55 60

Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu  
65 70 75

Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser  
80 85 90

Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly  
95 100 105

Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser  
110 115 120

Asp Leu Leu Thr

<210> 32

<211> 1752

<212> PRT

<213> Homo sapien

<400> 32

Met Ala Gly Pro Arg Pro Ser Pro Trp Ala Arg Leu Leu Leu Ala  
1 5 10 15

Ala Leu Ile Ser Val Ser Leu Ser Gly Thr Leu Ala Asn Arg Cys  
20 25 30

Lys Lys Ala Pro Val Lys Ser Cys Thr Glu Cys Val Arg Val Asp  
35 40 45

Lys Asp Cys Ala Tyr Cys Thr Asp Glu Met Phe Arg Asp Arg Arg  
50 55 60

Cys Asn Thr Gln Ala Glu Leu Leu Ala Ala Gly Cys Gln Arg Glu  
65 70 75

Ser Ile Val Val Met Glu Ser Ser Phe Gln Ile Thr Glu Glu Thr  
80 85 90

Gln Ile Asp Thr Thr Leu Arg Arg Ser Gln Met Ser Pro Gln Gly  
95 100 105

Leu Arg Val Arg Leu Arg Pro Gly Glu Glu Arg His Phe Glu Leu  
110 115 120

Glu Val Phe Glu Pro Leu Glu Ser Pro Val Asp Leu Tyr Ile Leu  
125 130 135

Met Asp Phe Ser Asn Ser Met Ser Asp Asp Leu Asp Asn Leu Lys  
140 145 150

Lys Met Gly Gln Asn Leu Ala Arg Val Leu Ser Gln Leu Thr Ser  
155 160 165

Asp Tyr Thr Ile Gly Phe Gly Lys Phe Val Asp Lys Val Ser Val

170	175	180
Pro Gln Thr Asp Met Arg Pro Glu Lys	Leu Lys Glu Pro Trp	Pro
185	190	195
Asn Ser Asp Pro Pro Phe Ser Phe Lys	Asn Val Ile Ser Leu Thr	
200	205	210
Glu Asp Val Asp Glu Phe Arg Asn Lys	Leu Gln Gly Glu Arg Ile	
215	220	225
Ser Gly Asn Leu Asp Ala Pro Glu Gly	Gly Phe Asp Ala Ile Leu	
230	235	240
Gln Thr Ala Val Cys Thr Arg Asp Ile	Gly Trp Arg Pro Asp Ser	
245	250	255
Thr His Leu Leu Val Phe Ser Thr Glu	Ser Ala Phe His Tyr Glu	
260	265	270
Ala Asp Gly Ala Asn Val Leu Ala Gly	Ile Met Ser Arg Asn Asp	
275	280	285
Glu Arg Cys His Leu Asp Thr Thr Gly	Thr Tyr Thr Gln Tyr Arg	
290	295	300
Thr Gln Asp Tyr Pro Ser Val Pro Thr	Leu Val Arg Leu Leu Ala	
305	310	315
Lys His Asn Ile Ile Pro Ile Phe Ala	Val Thr Asn Tyr Ser Tyr	
320	325	330
Ser Tyr Tyr Glu Lys Leu His Thr Tyr	Phe Pro Val Ser Ser Leu	
335	340	345
Gly Val Leu Gln Glu Asp Ser Ser Asn	Ile Val Glu Leu Leu Glu	
350	355	360
Glu Ala Phe Asn Arg Ile Arg Ser Asn	Leu Asp Ile Arg Ala Leu	
365	370	375
Asp Ser Pro Arg Gly Leu Arg Thr Glu	Val Thr Ser Lys Met Phe	
380	385	390
Gln Lys Thr Arg Thr Gly Ser Phe His	Ile Arg Arg Gly Glu Val	
395	400	405
Gly Ile Tyr Gln Val Gln Leu Arg Ala	Leu Glu His Val Asp Gly	
410	415	420
Thr His Val Cys Gln Leu Pro Glu Asp	Gln Lys Gly Asn Ile His	
425	430	435
Leu Lys Pro Ser Phe Ser Asp Gly Leu	Lys Met Asp Ala Gly Ile	
440	445	450
Ile Cys Asp Val Cys Thr Cys Glu Leu	Gln Lys Glu Val Arg Ser	
455	460	465

Ala Arg Cys Ser Phe Asn Gly Asp Phe Val Cys Gly Gln Cys Val  
 470 475 480  
 Cys Ser Glu Gly Trp Ser Gly Gln Thr Cys Asn Cys Ser Thr Gly  
 485 490 495  
 Ser Leu Ser Asp Ile Gln Pro Cys Leu Arg Glu Gly Glu Asp Lys  
 500 505 510  
 Pro Cys Ser Gly Arg Gly Glu Cys Gln Cys Gly His Cys Val Cys  
 515 520 525  
 Tyr Gly Glu Gly Arg Tyr Glu Gly Gln Phe Cys Glu Tyr Asp Asn  
 530 535 540  
 Phe Gln Cys Pro Arg Thr Ser Gly Phe Leu Cys Asn Asp Arg Gly  
 545 550 555  
 Arg Cys Ser Met Gly Gln Cys Val Cys Glu Pro Gly Trp Thr Gly  
 560 565 570  
 Pro Ser Cys Asp Cys Pro Leu Ser Asn Ala Thr Cys Ile Asp Ser  
 575 580 585  
 Asn Gly Gly Ile Cys Asn Gly Arg Gly His Cys Glu Cys Gly Arg  
 590 595 600  
 Cys His Cys His Gln Gln Ser Leu Tyr Thr Asp Thr Ile Cys Glu  
 605 610 615  
 Ile Asn Tyr Ser Ala Ile His Pro Gly Leu Cys Glu Asp Leu Arg  
 620 625 630  
 Ser Cys Val Gln Cys Gln Ala Trp Gly Thr Gly Glu Lys Lys Gly  
 635 640 645  
 Arg Thr Cys Glu Glu Cys Asn Phe Lys Val Lys Met Val Asp Glu  
 650 655 660  
 Leu Lys Arg Ala Glu Glu Val Val Val Arg Cys Ser Phe Arg Asp  
 665 670 675  
 Glu Asp Asp Asp Cys Thr Tyr Ser Tyr Thr Met Glu Gly Asp Gly  
 680 685 690  
 Ala Pro Gly Pro Asn Ser Thr Val Leu Val His Lys Lys Lys Asp  
 695 700 705  
 Cys Pro Pro Gly Ser Phe Trp Trp Leu Ile Pro Leu Leu Leu Leu  
 710 715 720  
 Leu Leu Pro Leu Leu Ala Leu Leu Leu Leu Leu Cys Trp Lys Tyr  
 725 730 735  
 Cys Ala Cys Cys Lys Ala Cys Leu Ala Leu Leu Pro Cys Cys Asn  
 740 745 750  
 Arg Gly His Met Val Gly Phe Lys Glu Asp His Tyr Met Leu Arg

755	760	765
Glu Asn Leu Met Ala Ser Asp His Leu Asp Thr Pro Met Leu Arg		
770	775	780
Ser Gly Asn Leu Lys Gly Arg Asp Val Val Arg Trp Lys Val Thr		
785	790	795
Asn Asn Met Gln Arg Pro Gly Phe Ala Thr His Ala Ala Ser Ile		
800	805	810
Asn Pro Thr Glu Leu Val Pro Tyr Gly Leu Ser Leu Arg Leu Ala		
815	820	825
Arg Leu Cys Thr Glu Asn Leu Leu Lys Pro Asp Thr Arg Glu Cys		
830	835	840
Ala Gln Leu Arg Gln Glu Val Glu Asn Leu Asn Glu Val Tyr		
845	850	855
Arg Gln Ile Ser Gly Val His Lys Leu Gln Gln Thr Lys Phe Arg		
860	865	870
Gln Gln Pro Asn Ala Gly Lys Lys Gln Asp His Thr Ile Val Asp		
875	880	885
Thr Val Leu Met Ala Pro Arg Ser Ala Lys Pro Ala Leu Leu Lys		
890	895	900
Leu Thr Glu Lys Gln Val Glu Gln Arg Ala Phe His Asp Leu Lys		
905	910	915
Val Ala Pro Gly Tyr Tyr Thr Leu Thr Ala Asp Gln Asp Ala Arg		
920	925	930
Gly Met Val Glu Phe Gln Glu Gly Val Glu Leu Val Asp Val Arg		
935	940	945
Val Pro Leu Phe Ile Arg Pro Glu Asp Asp Asp Glu Lys Gln Leu		
950	955	960
Leu Val Glu Ala Ile Asp Val Pro Ala Gly Thr Ala Thr Leu Gly		
965	970	975
Arg Arg Leu Val Asn Ile Thr Ile Ile Lys Glu Gln Ala Arg Asp		
980	985	990
Val Val Ser Phe Glu Gln Pro Glu Phe Ser Val Ser Arg Gly Asp		
995	1000	1005
Gln Val Ala Arg Ile Pro Val Ile Arg Arg Val Leu Asp Gly Gly		
1010	1015	1020
Lys Ser Gln Val Ser Tyr Arg Thr Gln Asp Gly Thr Ala Gln Gly		
1025	1030	1035
Asn Arg Asp Tyr Ile Pro Val Glu Gly Glu Leu Leu Phe Gln Pro		
1040	1045	1050

Gly Glu Ala Trp Lys Glu Leu Gln Val Lys Leu Leu Glu Leu Gln  
 1055 1060 1065  
 Glu Val Asp Ser Leu Leu Arg Gly Arg Gln Val Arg Arg Phe His  
 1070 1075 1080  
 Val Gln Leu Ser Asn Pro Lys Phe Gly Ala His Leu Gly Gln Pro  
 1085 1090 1095  
 His Ser Thr Thr Ile Ile Ile Arg Asp Pro Asp Glu Leu Asp Arg  
 1100 1105 1110  
 Ser Phe Thr Ser Gln Met Leu Ser Ser Gln Pro Pro Pro His Gly  
 1115 1120 1125  
 Asp Leu Gly Ala Pro Gln Asn Pro Asn Ala Lys Ala Ala Gly Ser  
 1130 1135 1140  
 Arg Lys Ile His Phe Asn Trp Leu Pro Pro Ser Gly Lys Pro Met  
 1145 1150 1155  
 Gly Tyr Arg Val Lys Tyr Trp Ile Gln Gly Asp Ser Glu Ser Glu  
 1160 1165 1170  
 Ala His Leu Leu Asp Ser Lys Val Pro Ser Val Glu Leu Thr Asn  
 1175 1180 1185  
 Leu Tyr Pro Tyr Cys Asp Tyr Glu Met Lys Val Cys Ala Tyr Gly  
 1190 1195 1200  
 Ala Gln Gly Glu Gly Pro Tyr Ser Ser Leu Val Ser Cys Arg Thr  
 1205 1210 1215  
 His Gln Glu Val Pro Ser Glu Pro Gly Arg Leu Ala Phe Asn Val  
 1220 1225 1230  
 Val Ser Ser Thr Val Thr Gln Leu Ser Trp Ala Glu Pro Ala Glu  
 1235 1240 1245  
 Thr Asn Gly Glu Ile Thr Ala Tyr Glu Val Cys Tyr Gly Leu Val  
 1250 1255 1260  
 Asn Asp Asp Asn Arg Pro Ile Gly Pro Met Lys Lys Val Leu Val  
 1265 1270 1275  
 Asp Asn Pro Lys Asn Arg Met Leu Leu Ile Glu Asn Leu Arg Glu  
 1280 1285 1290  
 Ser Gln Pro Tyr Arg Tyr Thr Val Lys Ala Arg Asn Gly Ala Gly  
 1295 1300 1305  
 Trp Gly Pro Glu Arg Glu Ala Ile Ile Asn Leu Ala Thr Gln Pro  
 1310 1315 1320  
 Lys Arg Pro Met Ser Ile Pro Ile Ile Pro Asp Ile Pro Ile Val  
 1325 1330 1335  
 Asp Ala Gln Ser Gly Glu Asp Tyr Asp Ser Phe Leu Met Tyr Ser

1340	1345	1350
Asp Asp Val Leu Arg Ser Pro Ser Gly Ser Gln Arg Pro Ser Val		
1355	1360	1365
Ser Asp Asp Thr Glu His Leu Val Asn Gly Arg Met Asp Phe Ala		
1370	1375	1380
Phe Pro Gly Ser Thr Asn Ser Leu His Arg Met Thr Thr Ser		
1385	1390	1395
Ala Ala Ala Tyr Gly Thr His Leu Ser Pro His Val Pro His Arg		
1400	1405	1410
Val Leu Ser Thr Ser Thr Leu Thr Arg Asp Tyr Asn Ser Leu		
1415	1420	1425
Thr Arg Ser Glu His Ser His Ser Thr Thr Leu Pro Arg Asp Tyr		
1430	1435	1440
Ser Thr Leu Thr Ser Val Ser Ser His Asp Ser Arg Leu Thr Ala		
1445	1450	1455
Gly Val Pro Asp Thr Pro Thr Arg Leu Val Phe Ser Ala Leu Gly		
1460	1465	1470
Pro Thr Ser Leu Arg Val Ser Trp Gln Glu Pro Arg Cys Glu Arg		
1475	1480	1485
Pro Leu Gln Gly Tyr Ser Val Glu Tyr Gln Leu Leu Asn Gly Gly		
1490	1495	1500
Glu Leu His Arg Leu Asn Ile Pro Asn Pro Ala Gln Thr Ser Val		
1505	1510	1515
Val Val Glu Asp Leu Leu Pro Asn His Ser Tyr Val Phe Arg Val		
1520	1525	1530
Arg Ala Gln Ser Gln Glu Gly Trp Gly Arg Glu Arg Glu Gly Val		
1535	1540	1545
Ile Thr Ile Glu Ser Gln Val His Pro Gln Ser Pro Leu Cys Pro		
1550	1555	1560
Leu Pro Gly Ser Ala Phe Thr Leu Ser Thr Pro Ser Ala Pro Gly		
1565	1570	1575
Pro Leu Val Phe Thr Ala Leu Ser Pro Asp Ser Leu Gln Leu Ser		
1580	1585	1590
Trp Glu Arg Pro Arg Arg Pro Asn Gly Asp Ile Val Gly Tyr Leu		
1595	1600	1605
Val Thr Cys Glu Met Ala Gln Gly Gly Pro Ala Thr Ala Phe		
1610	1615	1620
Arg Val Asp Gly Asp Ser Pro Glu Ser Arg Leu Thr Val Pro Gly		
1625	1630	1635

Leu Ser Glu Asn Val Pro Tyr Lys Phe Lys Val Gln Ala Arg Thr  
1640 1645 1650

Thr Glu Gly Phe Gly Pro Glu Arg Glu Gly Ile Ile Thr Ile Glu  
1655 1660 1665

Ser Gln Asp Gly Gly Pro Phe Pro Gln Leu Gly Ser Arg Ala Gly  
1670 1675 1680

Leu Phe Gln His Pro Leu Gln Ser Glu Tyr Ser Ser Ile Thr Thr  
1685 1690 1695

Thr His Thr Ser Ala Thr Glu Pro Phe Leu Val Asp Gly Pro Thr  
1700 1705 1710

Leu Gly Ala Gln His Leu Glu Ala Gly Gly Ser Leu Thr Arg His  
1715 1720 1725

Val Thr Gln Glu Phe Val Ser Arg Thr Leu Thr Thr Ser Gly Thr  
1730 1735 1740

Leu Ser Thr His Met Asp Gln Gln Phe Phe Gln Thr  
1745 1750

<210> 33

<211> 1336

<212> PRT

<213> Homo sapien

<400> 33

Met Thr Leu Asp Arg Pro Gly Glu Gly Ala Thr Met Leu Lys Thr  
1 5 10 15

Phe Thr Val Leu Leu Phe Cys Ile Arg Met Ser Leu Gly Met Thr  
20 25 30

Ser Ile Val Met Asp Pro Gln Pro Glu Leu Trp Ile Glu Ser Asn  
35 40 45

Tyr Pro Gln Ala Pro Trp Glu Asn Ile Thr Leu Trp Cys Arg Ser  
50 55 60

Pro Ser Arg Ile Ser Ser Lys Phe Leu Leu Lys Asp Lys Thr  
65 70 75

Gln Met Thr Trp Ile Arg Pro Ser His Lys Thr Phe Gln Val Ser  
80 85 90

Phe Leu Ile Gly Ala Leu Thr Glu Ser Asn Ala Gly Leu Tyr Arg  
95 100 105

Cys Cys Tyr Trp Lys Glu Thr Gly Trp Ser Lys Pro Ser Lys Val  
110 115 120

Leu Glu Leu Glu Ala Pro Gly Gln Leu Pro Lys Pro Ile Phe Trp  
125 130 135

Ile Gln Ala Glu Thr Pro Ala Leu Pro Gly Cys Asn Val Asn Ile

140	145	150
Leu Cys His Gly Trp Leu Gln Asp Leu Val Phe Met Leu Phe Lys		
155	160	165
Glu Gly Tyr Ala Glu Pro Val Asp Tyr Gln Val Pro Thr Gly Thr		
170	175	180
Met Ala Ile Phe Ser Ile Asp Asn Leu Thr Pro Glu Asp Glu Gly		
185	190	195
Val Tyr Ile Cys Arg Thr His Ile Gln Met Leu Pro Thr Leu Trp		
200	205	210
Ser Glu Pro Ser Asn Pro Leu Lys Leu Val Val Ala Gly Leu Tyr		
215	220	225
Pro Lys Pro Thr Leu Thr Ala His Pro Gly Pro Ile Met Ala Pro		
230	235	240
Gly Glu Ser Leu Asn Leu Arg Cys Gln Gly Pro Ile Tyr Gly Met		
245	250	255
Thr Phe Ala Leu Met Arg Val Glu Asp Leu Glu Lys Ser Phe Tyr		
260	265	270
His Lys Lys Thr Ile Lys Asn Glu Ala Asn Phe Phe Gln Ser		
275	280	285
Leu Lys Ile Gln Asp Thr Gly His Tyr Leu Cys Phe Tyr Tyr Asp		
290	295	300
Ala Ser Tyr Arg Gly Ser Leu Leu Ser Asp Val Leu Lys Ile Trp		
305	310	315
Val Thr Asp Thr Phe Pro Lys Thr Trp Leu Leu Ala Arg Pro Ser		
320	325	330
Ala Val Val Gln Met Gly Gln Asn Val Ser Leu Arg Cys Arg Gly		
335	340	345
Pro Val Asp Gly Val Gly Leu Ala Leu Tyr Lys Lys Gly Glu Asp		
350	355	360
Lys Pro Leu Gln Phe Leu Asp Ala Thr Ser Ile Asp Asp Asn Thr		
365	370	375
Ser Phe Phe Leu Asn Asn Val Thr Tyr Ser Asp Thr Gly Ile Tyr		
380	385	390
Ser Cys His Tyr Leu Leu Thr Trp Lys Thr Ser Ile Arg Met Pro		
395	400	405
Ser His Asn Thr Val Glu Leu Met Val Val Asp Lys Pro Pro Lys		
410	415	420
Pro Ser Leu Ser Ala Trp Pro Ser Thr Val Phe Lys Leu Gly Lys		
425	430	435

Ala Ile Thr Leu Gln Cys Arg Val Ser His Pro Val Leu Glu Phe  
 440 445 450  
 Ser Leu Glu Trp Glu Glu Arg Glu Thr Phe Gln Arg Phe Ser Val  
 455 460 465  
 Asn Gly Asp Phe Ile Ile Ser Asn Val Asp Gly Lys Gly Thr Gly  
 470 475 480  
 Thr Tyr Ser Cys Ser Tyr Arg Val Glu Thr His Pro Asn Met Trp  
 485 490 495  
 Ser His Arg Ser Glu Pro Leu Lys Leu Met Gly Pro Ala Gly Tyr  
 500 505 510  
 Leu Thr Trp Asn Tyr Val Leu Asn Glu Ala Ile Arg Leu Ser Leu  
 515 520 525  
 Ile Met Gln Leu Val Ala Leu Leu Leu Val Val Leu Trp Ile Arg  
 530 535 540  
 Trp Lys Cys Arg Arg Leu Arg Ile Arg Glu Ala Trp Leu Leu Gly  
 545 550 555  
 Thr Ala Gln Gly Val Thr Met Leu Phe Ile Val Thr Ala Leu Leu  
 560 565 570  
 Cys Cys Gly Leu Cys Asn Gly Val Leu Ile Glu Glu Thr Glu Ile  
 575 580 585  
 Val Met Pro Thr Pro Lys Pro Glu Leu Trp Ala Glu Thr Asn Phe  
 590 595 600  
 Pro Leu Ala Pro Trp Lys Asn Leu Thr Leu Trp Cys Arg Ser Pro  
 605 610 615  
 Ser Gly Ser Thr Lys Glu Phe Val Leu Leu Lys Asp Gly Thr Gly  
 620 625 630  
 Trp Ile Ala Thr Arg Pro Ala Ser Glu Gln Val Arg Ala Ala Phe  
 635 640 645  
 Pro Leu Gly Ala Leu Thr Gln Ser His Thr Gly Ser Tyr His Cys  
 650 655 660  
 His Ser Trp Glu Glu Met Ala Val Ser Glu Pro Ser Glu Ala Leu  
 665 670 675  
 Glu Leu Val Gly Thr Asp Ile Leu Pro Lys Pro Val Ile Ser Ala  
 680 685 690  
 Ser Pro Thr Ile Arg Gly Gln Glu Leu Gln Leu Arg Cys Lys Gly  
 695 700 705  
 Trp Leu Ala Gly Met Gly Phe Ala Leu Tyr Lys Glu Gly Glu Gln  
 710 715 720  
 Glu Pro Val Gln Gln Leu Gly Ala Val Gly Arg Glu Ala Phe Phe

725	730	735
Thr Ile Gln Arg Met Glu Asp Lys Asp Glu Gly Asn Tyr Ser Cys		
740	745	750
Arg Thr His Thr Glu Lys Leu Pro Phe Lys Trp Ser Glu Pro Ser		
755	760	765
Glu Pro Leu Glu Leu Val Ile Lys Glu Met Tyr Pro Lys Pro Phe		
770	775	780
Phe Lys Thr Trp Ala Ser Pro Val Val Thr Pro Gly Ala Arg Val		
785	790	795
Thr Phe Asn Cys Ser Thr Pro His Gln His Met Ser Phe Ile Leu		
800	805	810
Tyr Lys Asp Gly Ser Glu Ile Ala Ser Ser Asp Arg Ser Trp Ala		
815	820	825
Ser Pro Gly Ala Ser Ala Ala His Phe Leu Ile Ile Ser Val Gly		
830	835	840
Ile Gly Asp Gly Gly Asn Tyr Ser Cys Arg Tyr Tyr Asp Phe Ser		
845	850	855
Ile Trp Ser Glu Pro Ser Asp Pro Val Glu Leu Val Val Thr Glu		
860	865	870
Phe Tyr Pro Lys Pro Thr Leu Leu Ala Gln Pro Gly Pro Val Val		
875	880	885
Phe Pro Gly Lys Ser Val Ile Leu Arg Cys Gln Gly Thr Phe Gln		
890	895	900
Gly Met Arg Phe Ala Leu Leu Gln Glu Gly Ala His Val Pro Leu		
905	910	915
Gln Phe Arg Ser Val Ser Gly Asn Ser Ala Asp Phe Leu Leu His		
920	925	930
Thr Val Gly Ala Glu Asp Ser Gly Asn Tyr Ser Cys Ile Tyr Tyr		
935	940	945
Glu Thr Thr Met Ser Asn Arg Gly Ser Tyr Leu Ser Met Pro Leu		
950	955	960
Met Ile Trp Val Thr Asp Thr Phe Pro Lys Pro Trp Leu Phe Ala		
965	970	975
Glu Pro Ser Ser Val Val Pro Met Gly Gln Asn Val Thr Leu Trp		
980	985	990
Cys Arg Gly Pro Val His Gly Val Gly Tyr Ile Leu His Lys Glu		
995	1000	1005
Gly Glu Ala Thr Ser Met Gln Leu Trp Gly Ser Thr Ser Asn Asp		
1010	1015	1020

Gly Ala Phe Pro Ile Thr Asn Ile Ser Gly Thr Ser Met Gly Arg  
 1025 1030 1035  
 Tyr Ser Cys Cys Tyr His Pro Asp Trp Thr Ser Ser Ile Lys Ile  
 1040 1045 1050  
 Gln Pro Ser Asn Thr Leu Glu Leu Leu Val Thr Gly Leu Leu Pro  
 1055 1060 1065  
 Lys Pro Ser Leu Leu Ala Gln Pro Gly Pro Met Val Ala Pro Gly  
 1070 1075 1080  
 Glu Asn Met Thr Leu Gln Cys Gln Gly Glu Leu Pro Asp Ser Thr  
 1085 1090 1095  
 Phe Val Leu Leu Lys Glu Gly Ala Gln Glu Pro Leu Glu Gln Gln  
 1100 1105 1110  
 Arg Pro Ser Gly Tyr Arg Ala Asp Phe Trp Met Pro Ala Val Arg  
 1115 1120 1125  
 Gly Glu Asp Ser Gly Ile Tyr Ser Cys Val Tyr Tyr Leu Asp Ser  
 1130 1135 1140  
 Thr Pro Phe Ala Ala Ser Asn His Ser Asp Ser Leu Glu Ile Trp  
 1145 1150 1155  
 Val Thr Asp Lys Pro Pro Lys Pro Ser Leu Ser Ala Trp Pro Ser  
 1160 1165 1170  
 Thr Met Phe Lys Leu Gly Lys Asp Ile Thr Leu Gln Cys Arg Gly  
 1175 1180 1185  
 Pro Leu Pro Gly Val Glu Phe Val Leu Glu His Asp Gly Glu Glu  
 1190 1195 1200  
 Ala Pro Gln Gln Phe Ser Glu Asp Gly Asp Phe Val Ile Asn Asn  
 1205 1210 1215  
 Val Glu Gly Lys Gly Ile Gly Asn Tyr Ser Cys Ser Tyr Arg Leu  
 1220 1225 1230  
 Gln Ala Tyr Pro Asp Ile Trp Ser Glu Pro Ser Asp Pro Leu Glu  
 1235 1240 1245  
 Leu Val Gly Ala Ala Gly Pro Val Ala Gln Glu Cys Thr Val Gly  
 1250 1255 1260  
 Asn Ile Val Arg Ser Ser Leu Ile Val Val Val Val Ala Leu  
 1265 1270 1275  
 Gly Val Val Leu Ala Ile Glu Trp Lys Lys Trp Pro Arg Leu Arg  
 1280 1285 1290  
 Thr Arg Gly Ser Glu Thr Asp Gly Arg Asp Gln Thr Ile Ala Leu  
 1295 1300 1305  
 Glu Glu Cys Asn Gln Glu Gly Glu Pro Gly Thr Pro Ala Asn Ser

1310

1315

1320

Pro Ser Ser Thr Ser Gln Arg Ile Ser Val Glu Leu Pro Val Pro  
 1325 1330 1335

Ile

<210> 34  
 <211> 1907  
 <212> PRT  
 <213> Homo sapien

&lt;400&gt; 34

Met Ala Pro Glu Pro Ala Pro Gly Arg Thr Met Val Pro Leu Val  
 1 5 10 15

Pro Ala Leu Val Met Leu Gly Leu Val Ala Gly Ala His Gly Asp  
 20 25 30

Ser Lys Pro Val Phe Ile Lys Val Pro Glu Asp Gln Thr Gly Leu  
 35 40 45

Ser Gly Gly Val Ala Ser Phe Val Cys Gln Ala Thr Gly Glu Pro  
 50 55 60

Lys Pro Arg Ile Thr Trp Met Lys Lys Gly Lys Lys Val Ser Ser  
 65 70 75

Gln Arg Phe Glu Val Ile Glu Phe Asp Asp Gly Ala Gly Ser Val  
 80 85 90

Leu Arg Ile Gln Pro Leu Arg Val Gln Arg Asp Glu Ala Ile Tyr  
 95 100 105

Glu Cys Thr Ala Thr Asn Ser Leu Gly Glu Ile Asn Thr Ser Ala  
 110 115 120

Lys Leu Ser Val Leu Glu Glu Gln Leu Pro Pro Gly Phe Pro  
 125 130 135

Ser Ile Asp Met Gly Pro Gln Leu Lys Val Val Glu Lys Ala Arg  
 140 145 150

Thr Ala Thr Met Leu Cys Ala Ala Gly Gly Asn Pro Asp Pro Glu  
 155 160 165

Ile Ser Trp Phe Lys Asp Phe Leu Pro Val Asp Pro Ala Thr Ser  
 170 175 180

Asn Gly Arg Ile Lys Gln Leu Arg Ser Gly Ala Leu Gln Ile Glu  
 185 190 195

Ser Ser Glu Glu Ser Asp Gln Gly Lys Tyr Glu Cys Val Ala Thr  
 200 205 210

Asn Ser Ala Gly Thr Arg Tyr Ser Ala Pro Ala Asn Leu Tyr Val  
 215 220 225

Arg Val Arg Arg Val Ala Pro Arg Phe Ser Ile Pro Pro Ser Ser  
 230 235 240  
 Gln Glu Val Met Pro Gly Gly Ser Val Asn Leu Thr Cys Val Ala  
 245 250 255  
 Val Gly Ala Pro Met Pro Tyr Val Lys Trp Met Met Gly Ala Glu  
 260 265 270  
 Glu Leu Thr Lys Glu Asp Glu Met Pro Val Gly Arg Asn Val Leu  
 275 280 285  
 Glu Leu Ser Asn Val Val Arg Ser Ala Asn Tyr Thr Cys Val Ala  
 290 295 300  
 Ile Ser Ser Leu Gly Met Ile Glu Ala Thr Ala Gln Val Thr Val  
 305 310 315  
 Lys Ala Leu Pro Lys Pro Pro Ile Asp Leu Val Val Thr Glu Thr  
 320 325 330  
 Thr Ala Thr Ser Val Thr Leu Thr Trp Asp Ser Gly Asn Ser Glu  
 335 340 345  
 Pro Val Thr Tyr Tyr Gly Ile Gln Tyr Arg Ala Ala Gly Thr Glu  
 350 355 360  
 Gly Pro Phe Gln Glu Val Asp Gly Val Ala Thr Thr Arg Tyr Ser  
 365 370 375  
 Ile Gly Gly Leu Ser Pro Phe Ser Glu Tyr Ala Phe Arg Val Leu  
 380 385 390  
 Ala Val Asn Ser Ile Gly Arg Gly Pro Pro Ser Glu Ala Val Arg  
 395 400 405  
 Ala Arg Thr Gly Glu Gln Ala Pro Ser Ser Pro Pro Arg Arg Val  
 410 415 420  
 Gln Ala Arg Met Leu Ser Ala Ser Thr Met Leu Val Gln Trp Glu  
 425 430 435  
 Pro Pro Glu Glu Pro Asn Gly Leu Val Arg Gly Tyr Arg Val Tyr  
 440 445 450  
 Tyr Thr Pro Asp Ser Arg Arg Pro Pro Asn Ala Trp His Lys His  
 455 460 465  
 Asn Thr Asp Ala Gly Leu Leu Thr Thr Val Gly Ser Leu Leu Pro  
 470 475 480  
 Gly Ile Thr Tyr Ser Leu Arg Val Leu Ala Phe Thr Ala Val Gly  
 485 490 495  
 Asp Gly Pro Pro Ser Pro Thr Ile Gln Val Lys Thr Gln Gln Gly  
 500 505 510  
 Val Pro Ala Gln Pro Ala Asp Phe Gln Ala Glu Val Glu Ser Asp

515	520	525
Thr Arg Ile Gln Leu Ser Trp Leu Leu Pro Pro Gln Glu Arg Ile		
530	535	540
Ile Met Tyr Glu Leu Val Tyr Trp Ala Ala Glu Asp Glu Asp Gln		
545	550	555
Gln His Lys Val Thr Phe Asp Pro Thr Ser Ser Tyr Thr Leu Glu		
560	565	570
Asp Leu Lys Pro Asp Thr Leu Tyr Arg Phe Gln Leu Ala Ala Arg		
575	580	585
Ser Asp Met Gly Val Gly Val Phe Thr Pro Thr Ile Glu Ala Arg		
590	595	600
Thr Ala Gln Ser Thr Pro Ser Ala Pro Pro Gln Lys Val Met Cys		
605	610	615
Val Ser Met Gly Ser Thr Thr Val Arg Val Ser Trp Val Pro Pro		
620	625	630
Pro Ala Asp Ser Arg Asn Gly Val Ile Thr Gln Tyr Ser Val Ala		
635	640	645
His Glu Ala Val Asp Gly Glu Asp Arg Gly Arg His Val Val Asp		
650	655	660
Gly Ile Ser Arg Glu His Ser Ser Trp Asp Leu Val Gly Leu Glu		
665	670	675
Lys Trp Thr Glu Tyr Arg Val Trp Val Arg Ala His Thr Asp Val		
680	685	690
Gly Pro Gly Pro Glu Ser Ser Pro Val Leu Val Arg Thr Asp Glu		
695	700	705
Asp Val Pro Ser Gly Pro Pro Arg Lys Val Glu Val Glu Pro Leu		
710	715	720
Asn Ser Thr Ala Val His Val Tyr Trp Lys Leu Pro Val Pro Ser		
725	730	735
Lys Gln His Gly Gln Ile Arg Gly Tyr Gln Val Thr Tyr Val Arg		
740	745	750
Leu Glu Asn Gly Glu Pro Arg Gly Leu Pro Ile Ile Gln Asp Val		
755	760	765
Met Leu Ala Glu Ala Gln Trp Arg Pro Glu Glu Ser Glu Asp Tyr		
770	775	780
Glu Thr Thr Ile Ser Gly Leu Thr Pro Glu Thr Thr Tyr Ser Val		
785	790	795
Thr Val Ala Ala Tyr Thr Thr Lys Gly Asp Gly Ala Arg Ser Lys		
800	805	810

Pro Lys Ile Val Thr Thr Gly Ala Val Pro Gly Arg Pro Thr  
 815 820 825  
 Met Met Ile Ser Thr Thr Ala Met Asn Thr Ala Leu Leu Gln Trp  
 830 835 840  
 His Pro Pro Lys Glu Leu Pro Gly Glu Leu Leu Gly Tyr Arg Leu  
 845 850 855  
 Gln Tyr Cys Arg Ala Asp Glu Ala Arg Pro Asn Thr Ile Asp Phe  
 860 865 870  
 Gly Lys Asp Asp Gln His Phe Thr Val Thr Gly Leu His Lys Gly  
 875 880 885  
 Thr Thr Tyr Ile Phe Arg Leu Ala Ala Lys Asn Arg Ala Gly Leu  
 890 895 900  
 Gly Glu Glu Phe Glu Lys Glu Ile Arg Thr Pro Glu Asp Leu Pro  
 905 910 915  
 Ser Gly Phe Pro Gln Asn Leu His Val Thr Gly Leu Thr Thr Ser  
 920 925 930  
 Thr Thr Glu Leu Ala Trp Asp Pro Pro Val Leu Ala Glu Arg Asn  
 935 940 945  
 Gly Arg Ile Ile Ser Tyr Thr Val Val Phe Arg Asp Ile Asn Ser  
 950 955 960  
 Gln Gln Glu Leu Gln Asn Ile Thr Thr Asp Thr Arg Phe Thr Leu  
 965 970 975  
 Thr Gly Leu Lys Pro Asp Thr Thr Tyr Asp Ile Lys Val Arg Ala  
 980 985 990  
 Trp Thr Ser Lys Gly Ser Gly Pro Leu Ser Pro Ser Ile Gln Ser  
 995 1000 1005  
 Arg Thr Met Pro Val Glu Gln Val Phe Ala Lys Asn Phe Arg Val  
 1010 1015 1020  
 Ala Ala Ala Met Lys Thr Ser Val Leu Leu Ser Trp Glu Val Pro  
 1025 1030 1035  
 Asp Ser Tyr Lys Ser Ala Val Pro Phe Lys Ile Leu Tyr Asn Gly  
 1040 1045 1050  
 Gln Ser Val Glu Val Asp Gly His Ser Met Arg Lys Leu Ile Ala  
 1055 1060 1065  
 Asp Leu Gln Pro Asn Thr Glu Tyr Ser Phe Val Leu Met Asn Arg  
 1070 1075 1080  
 Gly Ser Ser Ala Gly Gly Leu Gln His Leu Val Ser Ile Arg Thr  
 1085 1090 1095  
 Ala Pro Asp Leu Leu Pro His Lys Pro Leu Pro Ala Ser Ala Tyr

1100	1105	1110
Ile Glu Asp Gly Arg Phe Asp Leu Ser Met Pro His Val Gln Asp		
1115	1120	1125
Pro Ser Leu Val Arg Trp Phe Tyr Ile Val Val Val Pro Ile Asp		
1130	1135	1140
Arg Val Gly Gly Ser Met Leu Thr Pro Arg Trp Ser Thr Pro Glu		
1145	1150	1155
Glu Leu Glu Leu Asp Glu Leu Leu Glu Ala Ile Glu Gln Gly Gly		
1160	1165	1170
Glu Glu Gln Arg Arg Arg Arg Gln Ala Glu Arg Leu Lys Pro		
1175	1180	1185
Tyr Val Ala Ala Gln Leu Asp Val Leu Pro Glu Thr Phe Thr Leu		
1190	1195	1200
Gly Asp Lys Lys Asn Tyr Arg Gly Phe Tyr Asn Arg Pro Leu Ser		
1205	1210	1215
Pro Asp Leu Ser Tyr Gln Cys Phe Val Leu Ala Ser Leu Lys Glu		
1220	1225	1230
Pro Met Asp Gln Lys Arg Tyr Ala Ser Ser Pro Tyr Ser Asp Glu		
1235	1240	1245
Ile Val Val Gln Val Thr Pro Ala Gln Gln Gln Glu Glu Pro Glu		
1250	1255	1260
Met Leu Trp Val Thr Gly Pro Val Leu Ala Val Ile Leu Ile Ile		
1265	1270	1275
Leu Ile Val Ile Ala Ile Leu Leu Phe Lys Arg Lys Arg Thr His		
1280	1285	1290
Ser Pro Ser Ser Lys Asp Glu Gln Ser Ile Gly Leu Lys Asp Ser		
1295	1300	1305
Leu Leu Ala His Ser Ser Asp Pro Val Glu Met Arg Arg Leu Asn		
1310	1315	1320
Tyr Gln Thr Pro Gly Met Arg Asp His Pro Pro Ile Pro Ile Thr		
1325	1330	1335
Asp Leu Ala Asp Asn Ile Glu Arg Leu Lys Ala Asn Asp Gly Leu		
1340	1345	1350
Lys Phe Ser Gln Glu Tyr Glu Ser Ile Asp Pro Gly Gln Gln Phe		
1355	1360	1365
Thr Trp Glu Asn Ser Asn Leu Glu Val Asn Lys Pro Lys Asn Arg		
1370	1375	1380
Tyr Ala Asn Val Ile Ala Tyr Asp His Ser Arg Val Ile Leu Thr		
1385	1390	1395

Ser Ile Asp Gly Val Pro Gly Ser Asp Tyr Ile Asn Ala Asn Tyr  
 1400 1405 1410  
 Ile Asp Gly Tyr Arg Lys Gln Asn Ala Tyr Ile Ala Thr Gln Gly  
 1415 1420 1425  
 Pro Leu Pro Glu Thr Met Gly Asp Phe Trp Arg Met Val Trp Glu  
 1430 1435 1440  
 Gln Arg Thr Ala Thr Val Val Met Met Thr Arg Leu Glu Glu Lys  
 1445 1450 1455  
 Ser Arg Val Lys Cys Asp Gln Tyr Trp Pro Ala Arg Gly Thr Glu  
 1460 1465 1470  
 Thr Cys Gly Leu Ile Gln Val Thr Leu Leu Asp Thr Val Glu Leu  
 1475 1480 1485  
 Ala Thr Tyr Thr Val Arg Thr Phe Ala Leu His Lys Ser Gly Ser  
 1490 1495 1500  
 Ser Glu Lys Arg Glu Leu Arg Gln Phe Gln Phe Met Ala Trp Pro  
 1505 1510 1515  
 Asp His Gly Val Pro Glu Tyr Pro Thr Pro Ile Leu Ala Phe Leu  
 1520 1525 1530  
 Arg Arg Val Lys Ala Cys Asn Pro Leu Asp Ala Gly Pro Met Val  
 1535 1540 1545  
 Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Cys Phe Ile Val  
 1550 1555 1560  
 Ile Asp Ala Met Leu Glu Arg Met Lys His Glu Lys Thr Val Asp  
 1565 1570 1575  
 Ile Tyr Gly His Val Thr Cys Met Arg Ser Gln Arg Asn Tyr Met  
 1580 1585 1590  
 Val Gln Thr Glu Asp Gln Tyr Val Phe Ile His Glu Ala Leu Leu  
 1595 1600 1605  
 Glu Ala Ala Thr Cys Gly His Thr Glu Val Pro Ala Arg Asn Leu  
 1610 1615 1620  
 Tyr Ala His Ile Gln Lys Leu Gly Gln Val Pro Pro Gly Glu Ser  
 1625 1630 1635  
 Val Thr Ala Met Glu Leu Glu Phe Lys Leu Leu Ala Ser Ser Lys  
 1640 1645 1650  
 Ala His Thr Ser Arg Phe Ile Ser Ala Asn Leu Pro Cys Asn Lys  
 1655 1660 1665  
 Phe Lys Asn Arg Leu Val Asn Ile Met Pro Tyr Glu Leu Thr Arg  
 1670 1675 1680  
 Val Cys Leu Gln Pro Ile Arg Gly Val Glu Gly Ser Asp Tyr Ile

1685	1690	1695
Asn Ala Ser Phe Leu Asp Gly Tyr Arg Gln Gln Lys Ala Tyr Ile		
1700	1705	1710
Ala Thr Gln Gly Pro Leu Ala Glu Ser Thr Glu Asp Phe Trp Arg		
1715	1720	1725
Met Leu Trp Glu His Asn Ser Thr Ile Ile Val Met Leu Thr Lys		
1730	1735	1740
Leu Arg Glu Met Gly Arg Glu Lys Cys His Gln Tyr Trp Pro Ala		
1745	1750	1755
Glu Arg Ser Ala Arg Tyr Gln Tyr Phe Val Val Asp Pro Met Ala		
1760	1765	1770
Glu Tyr Asn Met Pro Gln Tyr Ile Leu Arg Glu Phe Lys Val Thr		
1775	1780	1785
Asp Ala Arg Asp Gly Gln Ser Arg Thr Ile Arg Gln Phe Gln Phe		
1790	1795	1800
Thr Asp Trp Pro Glu Gln Gly Val Pro Lys Thr Gly Glu Gly Phe		
1805	1810	1815
Ile Asp Phe Ile Gly Gln Val His Lys Thr Lys Glu Gln Phe Gly		
1820	1825	1830
Gln Asp Gly Pro Ile Thr Val His Cys Ser Ala Gly Val Gly Arg		
1835	1840	1845
Thr Gly Val Phe Ile Thr Leu Ser Ile Val Leu Glu Arg Met Arg		
1850	1855	1860
Tyr Glu Gly Val Val Asp Met Phe Gln Thr Val Lys Thr Leu Arg		
1865	1870	1875
Thr Gln Arg Pro Ala Met Val Gln Thr Glu Asp Gln Tyr Gln Leu		
1880	1885	1890
Cys Tyr Arg Ala Ala Leu Glu Tyr Leu Gly Ser Phe Asp His Tyr		
1895	1900	1905

Ala Thr

<210> 35  
 <211> 310  
 <212> PRT  
 <213> Homo sapien

<400> 35  
 Met Arg Arg Ala Ala Leu Trp Leu Trp Leu Cys Ala Leu Ala Leu  
 1 5 10 15  
 Ser Leu Gln Leu Ala Leu Pro Gln Ile Val Ala Thr Asn Leu Pro  
 20 25 30

Pro	Glu	Asp	Gln	Asp	Gly	Ser	Gly	Asp	Asp	Ser	Asp	Asn	Phe	Ser
					35					40				45
Gly	Ser	Gly	Ala	Gly	Ala	Leu	Gln	Asp	Ile	Thr	Leu	Ser	Gln	Gln
					50					55				60
Thr	Pro	Ser	Thr	Trp	Lys	Asp	Thr	Gln	Leu	Leu	Thr	Ala	Ile	Pro
					65					70				75
Thr	Ser	Pro	Glu	Pro	Thr	Gly	Leu	Glu	Ala	Thr	Ala	Ala	Ser	Thr
					80					85				90
Ser	Thr	Leu	Pro	Ala	Gly	Glu	Gly	Pro	Lys	Glu	Gly	Glu	Ala	Val
					95					100				105
Val	Leu	Pro	Glu	Val	Glu	Pro	Gly	Leu	Thr	Ala	Arg	Glu	Gln	Glu
					110					115				120
Ala	Thr	Pro	Arg	Pro	Arg	Glu	Thr	Thr	Gln	Leu	Pro	Thr	Thr	His
					125					130				135
Gln	Ala	Ser	Thr	Thr	Thr	Ala	Thr	Thr	Ala	Gln	Glu	Pro	Ala	Thr
					140					145				150
Ser	His	Pro	His	Arg	Asp	Met	Gln	Pro	Gly	His	His	Glu	Thr	Ser
					155					160				165
Thr	Pro	Ala	Gly	Pro	Ser	Gln	Ala	Asp	Leu	His	Thr	Pro	His	Thr
					170					175				180
Glu	Asp	Gly	Gly	Pro	Ser	Ala	Thr	Glu	Arg	Ala	Ala	Glu	Asp	Gly
					185					190				195
Ala	Ser	Ser	Gln	Leu	Pro	Ala	Ala	Glu	Gly	Ser	Gly	Glu	Gln	Asp
					200					205				210
Phe	Thr	Phe	Glu	Thr	Ser	Gly	Glu	Asn	Thr	Ala	Val	Val	Ala	Val
					215					220				225
Glu	Pro	Asp	Arg	Arg	Asn	Gln	Ser	Pro	Val	Asp	Gln	Gly	Ala	Thr
					230					235				240
Gly	Ala	Ser	Gln	Gly	Leu	Leu	Asp	Arg	Lys	Glu	Val	Leu	Gly	Gly
					245					250				255
Val	Ile	Ala	Gly	Gly	Leu	Val	Gly	Leu	Ile	Phe	Ala	Val	Cys	Leu
					260					265				270
Val	Gly	Phe	Met	Leu	Tyr	Arg	Met	Lys	Lys	Lys	Asp	Glu	Gly	Ser
					275					280				285
Tyr	Ser	Leu	Glu	Glu	Pro	Lys	Gln	Ala	Asn	Gly	Gly	Ala	Tyr	Gln
					290					295				300
Lys	Pro	Thr	Lys	Gln	Glu	Glu	Phe	Tyr	Ala					
					305					310				

<211> 131  
<212> PRT  
<213> Homo sapien

<400> 36  
Met Lys Ile Phe Leu Pro Val Leu Leu Ala Ala Leu Leu Gly Val  
1 5 10 15  
Glu Arg Ala Ser Ser Leu Met Cys Phe Ser Cys Leu Asn Gln Lys  
20 25 30  
Ser Asn Leu Tyr Cys Leu Lys Pro Thr Ile Cys Ser Asp Gln Asp  
35 40 45  
Asn Tyr Cys Val Thr Val Ser Ala Ser Ala Gly Ile Gly Asn Leu  
50 55 60  
Val Thr Phe Gly His Ser Leu Ser Lys Thr Cys Ser Pro Ala Cys  
65 70 75  
Pro Ile Pro Glu Gly Val Asn Val Gly Val Ala Ser Met Gly Ile  
80 85 90  
Ser Cys Cys Gln Ser Phe Leu Cys Asn Phe Ser Ala Ala Asp Gly  
95 100 105  
Gly Leu Arg Ala Ser Val Thr Leu Leu Gly Ala Gly Leu Leu Leu  
110 115 120  
Ser Leu Leu Pro Ala Leu Leu Arg Phe Gly Pro  
125 130

<210> 37  
<211> 249  
<212> PRT  
<213> Homo sapien

<400> 37  
Met Asp Gly Lys Lys Cys Ser Val Trp Met Phe Leu Pro Leu Val  
1 5 10 15  
Phe Thr Leu Phe Thr Ser Ala Gly Leu Trp Ile Val Tyr Phe Ile  
20 25 30  
Ala Val Glu Asp Asp Lys Ile Leu Pro Leu Asn Ser Ala Glu Arg  
35 40 45  
Lys Pro Gly Val Lys His Ala Pro Tyr Ile Ser Ile Ala Gly Asp  
50 55 60  
Asp Pro Pro Ala Ser Cys Val Phe Ser Gln Val Met Asn Met Ala  
65 70 75  
Ala Phe Leu Ala Leu Val Val Ala Val Leu Arg Phe Ile Gln Leu  
80 85 90  
Lys Pro Lys Val Leu Asn Pro Trp Leu Asn Ile Ser Gly Leu Val  
95 100 105

Ala Leu Cys Leu Ala Ser Phe Gly Met Thr Leu Leu Gly Asn Phe  
 110 115 120  
 Gln Leu Thr Asn Asp Glu Glu Ile His Asn Val Gly Thr Ser Leu  
 125 130 135  
 Thr Phe Gly Phe Gly Thr Leu Thr Cys Trp Ile Gln Ala Ala Leu  
 140 145 150  
 Thr Leu Lys Val Asn Ile Lys Asn Glu Gly Arg Arg Val Gly Ile  
 155 160 165  
 Pro Arg Val Ile Leu Ser Ala Ser Ile Thr Leu Cys Val Val Leu  
 170 175 180  
 Tyr Phe Ile Leu Met Ala Gln Ser Ile His Met Tyr Ala Ala Arg  
 185 190 195  
 Val Gln Trp Gly Leu Val Met Cys Phe Leu Ser Tyr Phe Gly Thr  
 200 205 210  
 Phe Ala Val Glu Phe Arg His Tyr Arg Tyr Glu Ile Val Cys Ser  
 215 220 225  
 Glu Tyr Gln Glu Asn Phe Leu Ser Phe Ser Glu Ser Leu Ser Glu  
 230 235 240  
 Ala Ser Glu Tyr Gln Thr Asp Gln Val  
 245

<210> 38  
 <211> 145  
 <212> PRT  
 <213> Homo sapien

<400> 38  
 Met Glu Leu Ala Leu Leu Cys Gly Leu Val Val Met Ala Gly Val  
 1 5 10 15  
 Ile Pro Ile Gln Gly Gly Ile Leu Asn Leu Asn Lys Met Val Lys  
 20 25 30  
 Gln Val Thr Gly Lys Met Pro Ile Leu Ser Tyr Trp Pro Tyr Gly  
 35 40 45  
 Cys His Cys Gly Leu Gly Gly Arg Gly Gln Pro Lys Asp Ala Thr  
 50 55 60  
 Asp Trp Cys Cys Gln Thr His Asp Cys Cys Tyr Asp His Leu Lys  
 65 70 75  
 Thr Gln Gly Cys Gly Ile Tyr Lys Asp Tyr Tyr Arg Tyr Asn Phe  
 80 85 90  
 Ser Gln Gly Asn Ile His Cys Ser Asp Lys Gly Ser Trp Cys Glu  
 95 100 105  
 Gln Gln Leu Cys Ala Cys Asp Lys Glu Val Ala Phe Cys Leu Lys

110

115

120

Arg Asn Leu Asp Thr Tyr Gln Lys Arg Leu Arg Phe Tyr Trp Arg  
 125 130 135

Pro His Cys Arg Gly Gln Thr Pro Gly Cys  
 140 145

<210> 39  
 <211> 1533  
 <212> PRT  
 <213> Homo sapien

&lt;400&gt; 39

Met Tyr Ile Arg Val Ser Tyr Asp Thr Lys Pro Asp Ser Leu Leu  
 1 5 10 15

His Leu Met Val Lys Asp Trp Gln Leu Glu Leu Pro Lys Leu Leu  
 20 25 30

Ile Ser Val His Gly Gly Leu Gln Asn Phe Glu Met Gln Pro Lys  
 35 40 45

Leu Lys Gln Val Phe Gly Lys Gly Leu Ile Lys Ala Ala Met Thr  
 50 55 60

Thr Gly Ala Trp Ile Phe Thr Gly Gly Val Ser Thr Gly Val Ile  
 65 70 75

Ser His Val Gly Asp Ala Leu Lys Asp His Ser Ser Lys Ser Arg  
 80 85 90

Gly Arg Val Cys Ala Ile Gly Ile Ala Pro Trp Gly Ile Val Glu  
 95 100 105

Asn Lys Glu Asp Leu Val Gly Lys Asp Val Thr Arg Val Tyr Gln  
 110 115 120

Thr Met Ser Asn Pro Leu Ser Lys Leu Ser Val Leu Asn Asn Ser  
 125 130 135

His Thr His Phe Ile Leu Ala Asp Asn Gly Thr Leu Gly Lys Tyr  
 140 145 150

Gly Ala Glu Val Lys Leu Arg Arg Leu Leu Glu Lys His Ile Ser  
 155 160 165

Leu Gln Lys Ile Asn Thr Arg Leu Gly Gln Gly Val Pro Leu Val  
 170 175 180

Gly Leu Val Val Glu Gly Gly Pro Asn Val Val Ser Ile Val Leu  
 185 190 195

Glu Tyr Leu Gln Glu Glu Pro Pro Ile Pro Val Val Ile Cys Asp  
 200 205 210

Gly Ser Gly Arg Ala Ser Asp Ile Leu Ser Phe Ala His Lys Tyr  
 215 220 225

Cys Glu Glu Gly Gly Ile Ile Asn Glu Ser Leu Arg Glu Gln Leu  
 230 235 240  
 Leu Val Thr Ile Gln Lys Thr Phe Asn Tyr Asn Lys Ala Gln Ser  
 245 250 255  
 His Gln Leu Phe Ala Ile Ile Met Glu Cys Met Lys Lys Lys Glu  
 260 265 270  
 Leu Val Thr Val Phe Arg Met Gly Ser Glu Gly Gln Gln Asp Ile  
 275 280 285  
 Glu Met Ala Ile Leu Thr Ala Leu Leu Lys Gly Thr Asn Val Ser  
 290 295 300  
 Ala Pro Asp Gln Leu Ser Leu Ala Leu Ala Trp Asn Arg Val Asp  
 305 310 315  
 Ile Ala Arg Ser Gln Ile Phe Val Phe Gly Pro His Trp Thr Pro  
 320 325 330  
 Leu Gly Ser Leu Ala Pro Pro Thr Asp Ser Lys Ala Thr Glu Lys  
 335 340 345  
 Glu Lys Lys Pro Pro Met Ala Thr Thr Lys Gly Gly Arg Gly Lys  
 350 355 360  
 Gly Lys Gly Lys Lys Lys Gly Lys Val Lys Glu Glu Val Glu Glu  
 365 370 375  
 Glu Thr Asp Pro Arg Lys Ile Glu Leu Leu Asn Trp Val Asn Ala  
 380 385 390  
 Leu Glu Gln Ala Met Leu Asp Ala Leu Val Leu Asp Arg Val Asp  
 395 400 405  
 Phe Val Lys Leu Ile Glu Asn Gly Val Asn Met Gln His Phe  
 410 415 420  
 Leu Thr Ile Pro Arg Leu Glu Glu Leu Tyr Asn Thr Arg Leu Gly  
 425 430 435  
 Pro Pro Asn Thr Leu His Leu Leu Val Arg Asp Val Lys Lys Ser  
 440 445 450  
 Asn Leu Pro Pro Asp Tyr His Ile Ser Leu Ile Asp Ile Gly Leu  
 455 460 465  
 Val Leu Glu Tyr Leu Met Gly Gly Ala Tyr Arg Cys Asn Tyr Thr  
 470 475 480  
 Arg Lys Asn Phe Arg Thr Leu Tyr Asn Asn Leu Phe Gly Pro Lys  
 485 490 495  
 Arg Pro Lys Ala Leu Lys Leu Leu Gly Met Glu Asp Asp Glu Pro  
 500 505 510  
 Pro Ala Lys Gly Lys Lys Lys Lys Lys Lys Glu Glu Glu

515	520	525
Ile Asp Ile Asp Val Asp Asp Pro Ala Val Ser Arg Phe Gln Tyr		
530	535	540
Pro Phe His Glu Leu Met Val Trp Ala Val Leu Met Lys Arg Gln		
545	550	555
Lys Met Ala Val Phe Leu Trp Gln Arg Gly Glu Glu Ser Met Ala		
560	565	570
Lys Ala Leu Val Ala Cys Lys Leu Tyr Lys Ala Met Ala His Glu		
575	580	585
Ser Ser Glu Ser Asp Leu Val Asp Asp Ile Ser Gln Asp Leu Asp		
590	595	600
Asn Asn Ser Lys Asp Phe Gly Gln Leu Ala Leu Glu Leu Leu Asp		
605	610	615
Gln Ser Tyr Lys His Asp Glu Gln Ile Ala Met Lys Leu Leu Thr		
620	625	630
Tyr Glu Leu Lys Asn Trp Ser Asn Ser Thr Cys Leu Lys Leu Ala		
635	640	645
Val Ala Ala Lys His Arg Asp Phe Ile Ala His Thr Cys Ser Gln		
650	655	660
Met Leu Leu Thr Asp Met Trp Met Gly Arg Leu Arg Met Arg Lys		
665	670	675
Asn Pro Gly Leu Lys Val Ile Met Gly Ile Leu Leu Pro Pro Thr		
680	685	690
Ile Leu Phe Leu Glu Phe Arg Thr Tyr Asp Asp Phe Ser Tyr Gln		
695	700	705
Thr Ser Lys Glu Asn Glu Asp Gly Lys Glu Lys Glu Glu Glu Asn		
710	715	720
Thr Asp Ala Asn Ala Asp Ala Gly Ser Arg Lys Gly Asp Glu Glu		
725	730	735
Asn Glu His Lys Lys Gln Arg Ser Ile Pro Ile Gly Thr Lys Ile		
740	745	750
Cys Glu Phe Tyr Asn Ala Pro Ile Val Lys Phe Trp Phe Tyr Thr		
755	760	765
Ile Ser Tyr Leu Gly Tyr Leu Leu Leu Phe Asn Tyr Val Ile Leu		
770	775	780
Val Arg Met Asp Gly Trp Pro Ser Leu Gln Glu Trp Ile Val Ile		
785	790	795
Ser Tyr Ile Val Ser Leu Ala Leu Glu Lys Ile Arg Glu Ile Leu		
800	805	810

Met Ser Glu Pro Gly Lys Leu Ser Gln Lys Ile Lys Val Trp Leu  
 815 820 825  
 Gln Glu Tyr Trp Asn Ile Thr Asp Leu Val Ala Ile Ser Thr Phe  
 830 835 840  
 Met Ile Gly Ala Ile Leu Arg Leu Gln Asn Gln Pro Tyr Met Gly  
 845 850 855  
 Tyr Gly Arg Val Ile Tyr Cys Val Asp Ile Ile Phe Trp Tyr Ile  
 860 865 870  
 Arg Val Leu Asp Ile Phe Gly Val Asn Lys Tyr Leu Gly Pro Tyr  
 875 880 885  
 Val Met Met Ile Gly Lys Met Met Ile Asp Met Leu Tyr Phe Val  
 890 895 900  
 Val Ile Met Leu Val Val Leu Met Ser Phe Gly Val Ala Arg Gln  
 905 910 915  
 Ala Ile Leu His Pro Glu Glu Lys Pro Ser Trp Lys Leu Ala Arg  
 920 925 930  
 Asn Ile Phe Tyr Met Pro Tyr Trp Met Ile Tyr Gly Glu Val Phe  
 935 940 945  
 Ala Asp Gln Ile Asp Leu Tyr Ala Met Glu Ile Asn Pro Pro Cys  
 950 955 960  
 Gly Glu Asn Leu Tyr Asp Glu Glu Gly Lys Arg Leu Pro Pro Cys  
 965 970 975  
 Ile Pro Gly Ala Trp Leu Thr Pro Ala Leu Met Ala Cys Tyr Leu  
 980 985 990  
 Leu Val Ala Asn Ile Leu Leu Val Asn Leu Leu Ile Ala Val Phe  
 995 1000 1005  
 Asn Asn Thr Phe Phe Glu Val Lys Ser Ile Ser Asn Gln Val Trp  
 1010 1015 1020  
 Lys Phe Gln Arg Tyr Gln Leu Ile Met Thr Phe His Asp Arg Pro  
 1025 1030 1035  
 Val Leu Pro Pro Pro Met Ile Ile Leu Ser His Ile Tyr Ile Ile  
 1040 1045 1050  
 Ile Met Arg Leu Ser Gly Arg Cys Arg Lys Lys Arg Glu Gly Asp  
 1055 1060 1065  
 Gln Glu Glu Arg Asp Arg Gly Leu Lys Leu Phe Leu Ser Asp Glu  
 1070 1075 1080  
 Glu Leu Lys Arg Leu His Glu Phe Glu Glu Gln Cys Val Gln Glu  
 1085 1090 1095  
 His Phe Arg Glu Lys Glu Asp Glu Gln Gln Ser Ser Asp Glu

1100	1105	1110
Arg Ile Arg Val Thr Ser Glu Arg Val Glu Asn Met Ser Met Arg		
1115	1120	1125
Leu Glu Glu Ile Asn Glu Arg Glu Thr Phe Met Lys Thr Ser Leu		
1130	1135	1140
Gln Thr Val Asp Leu Arg Leu Ala Gln Leu Glu Glu Leu Ser Asn		
1145	1150	1155
Arg Met Val Asn Ala Leu Glu Asn Leu Ala Gly Ile Asp Arg Ser		
1160	1165	1170
Asp Leu Ile Gln Ala Arg Ser Arg Ala Ser Ser Glu Cys Glu Ala		
1175	1180	1185
Thr Tyr Leu Leu Arg Gln Ser Ser Ile Asn Ser Ala Asp Gly Tyr		
1190	1195	1200
Ser Leu Tyr Arg Tyr His Phe Asn Gly Glu Glu Leu Leu Phe Glu		
1205	1210	1215
Asp Thr Ser Leu Ser Thr Ser Pro Gly Thr Gly Val Arg Lys Lys		
1220	1225	1230
Thr Cys Ser Phe Arg Ile Lys Glu Glu Lys Asp Val Lys Thr His		
1235	1240	1245
Leu Val Pro Glu Cys Gln Asn Ser Leu His Leu Ser Leu Gly Thr		
1250	1255	1260
Ser Thr Ser Ala Thr Pro Asp Gly Ser His Leu Ala Val Asp Asp		
1265	1270	1275
Léu Lys Asn Ala Glu Glu Ser Lys Leu Gly Pro Asp Ile Gly Ile		
1280	1285	1290
Ser Lys Glu Asp Asp Glu Arg Gln Thr Asp Ser Lys Lys Glu Glu		
1295	1300	1305
Thr Ile Ser Pro Ser Leu Asn Lys Thr Asp Val Ile His Gly Gln		
1310	1315	1320
Asp Lys Ser Asp Val Gln Asn Thr Gln Leu Thr Val Glu Thr Thr		
1325	1330	1335
Asn Ile Glu Gly Thr Ile Ser Tyr Pro Leu Glu Glu Thr Lys Ile		
1340	1345	1350
Thr Arg Tyr Phe Pro Asp Glu Thr Ile Asn Ala Cys Lys Thr Met		
1355	1360	1365
Lys Ser Arg Ser Phe Val Tyr Ser Arg Gly Arg Lys Leu Val Gly		
1370	1375	1380
Gly Val Asn Gln Asp Val Glu Tyr Ser Ser Ile Thr Asp Gln Gln		
1385	1390	1395

Leu Thr Thr Glu Trp Gln Cys Gln Val Gln Lys Ile Thr Arg Ser  
 1400 1405 1410  
 His Ser Thr Asp Ile Pro Tyr Ile Val Ser Glu Ala Ala Val Gln  
 1415 1420 1425  
 Ala Glu Gln Lys Glu Gln Phe Ala Asp Met Gln Asp Glu His His  
 1430 1435 1440  
 Val Ala Glu Ala Ile Pro Arg Ile Pro Arg Leu Ser Leu Thr Ile  
 1445 1450 1455  
 Thr Asp Arg Asn Gly Met Glu Asn Leu Leu Ser Val Lys Pro Asp  
 1460 1465 1470  
 Gln Thr Leu Gly Phe Pro Ser Leu Arg Ser Lys Ser Leu His Gly  
 1475 1480 1485  
 His Pro Arg Asn Val Lys Ser Ile Gln Gly Lys Leu Asp Arg Ser  
 1490 1495 1500  
 Gly His Ala Ser Ser Val Ser Ser Leu Val Ile Val Ser Gly Met  
 1505 1510 1515  
 Thr Ala Glu Glu Lys Lys Val Lys Lys Glu Lys Ala Ser Thr Glu  
 1520 1525 1530

Thr Glu Cys

<210> 40  
 <211> 462  
 <212> PRT  
 <213> Homo sapien

<400> 40  
 Met Ser Thr Glu Lys Val Asp Gln Lys Glu Glu Ala Gly Glu Lys  
 1 5 10 15  
 Glu Val Cys Gly Asp Gln Ile Lys Gly Pro Asp Lys Glu Glu Glu  
 20 25 30  
 Pro Pro Ala Ala Ala Ser His Gly Gln Gly Trp Arg Pro Gly Gly  
 35 40 45  
 Arg Ala Ala Arg Asn Ala Arg Pro Glu Pro Gly Ala Arg His Pro  
 50 55 60  
 Ala Leu Pro Ala Met Val Asn Asp Pro Pro Val Pro Ala Leu Leu  
 65 70 75  
 Trp Ala Gln Glu Val Gly Gln Val Leu Ala Gly Arg Ala Arg Arg  
 80 85 90  
 Leu Leu Leu Gln Phe Gly Val Leu Phe Cys Thr Ile Leu Leu Leu  
 95 100 105  
 Leu Trp Val Ser Val Phe Leu Tyr Gly Ser Phe Tyr Tyr Ser Tyr

110	115	120
Met Pro Thr Val Ser His Leu Ser Pro Val His Phe Tyr Tyr Arg		
125	130	135
Thr Asp Cys Asp Ser Ser Thr Thr Ser Leu Cys Ser Phe Pro Val		
140	145	150
Ala Asn Val Ser Leu Thr Lys Gly Gly Arg Asp Arg Val Leu Met		
155	160	165
Tyr Gly Gln Pro Tyr Arg Val Thr Leu Glu Leu Glu Leu Pro Glu		
170	175	180
Ser Pro Val Asn Gln Asp Leu Gly Met Phe Leu Val Thr Ile Ser		
185	190	195
Cys Tyr Thr Arg Gly Gly Arg Ile Ile Ser Thr Ser Ser Arg Ser		
200	205	210
Val Met Leu His Tyr Arg Ser Asp Leu Leu Gln Met Leu Asp Thr		
215	220	225
Leu Val Phe Ser Ser Leu Leu Leu Phe Gly Phe Ala Glu Gln Lys		
230	235	240
Gln Leu Leu Glu Val Glu Leu Tyr Ala Asp Tyr Arg Glu Asn Ser		
245	250	255
Tyr Val Pro Thr Thr Gly Ala Ile Ile Glu Ile His Ser Lys Arg		
260	265	270
Ile Gln Leu Tyr Gly Ala Tyr Leu Arg Ile His Ala His Phe Thr		
275	280	285
Gly Leu Arg Tyr Leu Leu Tyr Asn Phe Pro Met Thr Cys Ala Phe		
290	295	300
Ile Gly Val Ala Ser Asn Phe Thr Phe Leu Ser Val Ile Val Leu		
305	310	315
Phe Ser Tyr Met Gln Trp Val Trp Gly Gly Ile Trp Pro Arg His		
320	325	330
Arg Phe Ser Leu Gln Val Asn Ile Arg Lys Arg Asp Asn Ser Arg		
335	340	345
Lys Glu Val Gln Arg Arg Ile Ser Ala His Gln Pro Gly Pro Glu		
350	355	360
Gly Gln Glu Glu Ser Thr Pro Gln Ser Asp Val Thr Glu Asp Gly		
365	370	375
Glu Ser Pro Glu Asp Pro Ser Gly Thr Glu Gly Gln Leu Ser Glu		
380	385	390
Glu Glu Lys Pro Asp Gln Gln Pro Leu Ser Gly Glu Glu Glu Leu		
395	400	405

Glu	Pro	Glu	Ala	Ser	Asp	Gly	Ser	Gly	Ser	Trp	Glu	Asp	Ala	Ala
410														420
Leu	Leu	Thr	Glu	Ala	Asn	Leu	Pro	Ala	Pro	Ala	Pro	Ala	Ser	Ala
425														435
Ser	Ala	Pro	Val	Leu	Glu	Thr	Leu	Gly	Ser	Ser	Glu	Pro	Ala	Gly
440														450
Gly	Ala	Leu	Arg	Gln	Arg	Pro	Thr	Cys	Ser	Ser	Ser			
455														460

<210> 41  
 <211> 1015  
 <212> PRT  
 <213> Homo sapien

<400> 41														
Met	Gly	Pro	Pro	Leu	Pro	Leu								
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Pro	Pro	Arg	Val	Leu	Pro	Ala	Ala	Pro	Ser	Ser	Val	Pro	Arg	Gly
			20					25						30
Arg	Gln	Leu	Pro	Gly	Arg	Leu	Gly	Cys	Leu	Leu	Glu	Glu	Gly	Leu
				35				40						45
Cys	Gly	Ala	Ser	Glu	Ala	Cys	Val	Asn	Asp	Gly	Val	Phe	Gly	Arg
				50				55						60
Cys	Gln	Lys	Val	Pro	Ala	Met	Asp	Phe	Tyr	Arg	Tyr	Glu	Val	Ser
				65				70						75
Pro	Val	Ala	Leu	Gln	Arg	Leu	Arg	Val	Ala	Leu	Gln	Lys	Leu	Ser
				80				85						90
Gly	Thr	Gly	Phe	Thr	Trp	Gln	Asp	Asp	Tyr	Thr	Gln	Tyr	Val	Met
				95				100						105
Asp	Gln	Glu	Leu	Ala	Asp	Leu	Pro	Lys	Thr	Tyr	Leu	Arg	Arg	Pro
				110				115						120
Glu	Ala	Ser	Ser	Pro	Ala	Arg	Pro	Ser	Lys	His	Ser	Val	Gly	Ser
				125				130						135
Glu	Arg	Arg	Tyr	Ser	Arg	Glu	Gly	Gly	Ala	Ala	Leu	Ala	Asn	Ala
				140				145						150
Leu	Arg	Arg	His	Leu	Pro	Phe	Leu	Glu	Ala	Leu	Ser	Gln	Ala	Pro
				155				160						165
Ala	Ser	Asp	Val	Leu	Ala	Arg	Thr	His	Thr	Ala	Gln	Asp	Arg	Pro
				170				175						180
Pro	Ala	Glu	Gly	Asp	Asp	Arg	Phe	Ser	Glu	Ser	Ile	Leu	Thr	Tyr
				185				190						195
Val	Ala	His	Thr	Ser	Ala	Leu	Thr	Tyr	Pro	Pro	Gly	Pro	Arg	Thr

200	205	210
Gln Leu Arg Glu Asp Leu Leu Pro Arg	Thr Leu Gly Gln Leu Gln	
215	220	225
Pro Asp Glu Leu Ser Pro Lys Val Asp	Ser Gly Val Asp Arg His	
230	235	240
His Leu Met Ala Ala Leu Ser Ala Tyr	Ala Ala Gln Arg Pro Pro	
245	250	255
Ala Pro Pro Gly Glu Gly Ser Leu Glu	Pro Gln Tyr Leu Leu Arg	
260	265	270
Ala Pro Ser Arg Met Pro Arg Pro Leu	Leu Ala Pro Ala Ala Pro	
275	280	285
Gln Lys Trp Pro Ser Pro Leu Gly Asp	Ser Glu Asp Pro Ser Ser	
290	295	300
Thr Gly Asp Gly Ala Arg Ile His Thr	Leu Leu Lys Asp Leu Gln	
305	310	315
Arg Gln Pro Ala Glu Val Arg Gly Leu	Ser Gly Leu Glu Leu Asp	
320	325	330
Gly Met Ala Glu Leu Met Ala Gly Leu	Met Gln Gly Val Asp His	
335	340	345
Gly Val Ala Arg Gly Ser Pro Gly Arg	Ala Ala Leu Gly Glu Ser	
350	355	360
Gly Glu Gln Ala Asp Gly Pro Lys Ala	Thr Leu Arg Gly Asp Ser	
365	370	375
Phe Pro Asp Asp Gly Val Gln Asp Asp	Asp Asp Arg Leu Tyr Gln	
380	385	390
Glu Val His Arg Leu Ser Ala Thr Leu	Gly Gly Leu Leu Gln Asp	
395	400	405
His Gly Ser Arg Leu Leu Pro Gly Ala	Leu Pro Phe Ala Arg Pro	
410	415	420
Leu Asp Met Glu Arg Lys Lys Ser Glu	His Pro Glu Ser Ser Leu	
425	430	435
Ser Ser Glu Glu Glu Thr Ala Gly Val	Glu Asn Val Lys Ser Gln	
440	445	450
Thr Tyr Ser Lys Asp Leu Leu Gly Gln	Gln Pro His Ser Glu Pro	
455	460	465
Gly Ala Ala Ala Phe Gly Glu Leu Gln	Asn Gln Met Pro Gly Pro	
470	475	480
Ser Lys Glu Glu Gln Ser Leu Pro Ala	Gly Ala Gln Glu Ala Leu	
485	490	495

Ser Asp Gly Leu Gln Leu Glu Val Gln Pro Ser Glu Glu Glu Ala  
 500 505 510  
 Arg Gly Tyr Ile Val Thr Asp Arg Asp Pro Leu Arg Pro Glu Glu  
 515 520 525  
 Gly Arg Arg Leu Val Glu Asp Val Ala Arg Leu Leu Gln Val Pro  
 530 535 540  
 Ser Ser Ala Phe Ala Asp Val Glu Val Leu Gly Pro Ala Val Thr  
 545 550 555  
 Phe Lys Val Ser Ala Asn Val Gln Asn Val Thr Thr Glu Asp Val  
 560 565 570  
 Glu Lys Ala Thr Val Asp Asn Lys Asp Lys Leu Glu Glu Thr Ser  
 575 580 585  
 Gly Leu Lys Ile Leu Gln Thr Gly Val Gly Ser Lys Ser Lys Leu  
 590 595 600  
 Lys Phe Leu Pro Pro Gln Ala Glu Gln Glu Asp Ser Thr Lys Phe  
 605 610 615  
 Ile Ala Leu Thr Leu Val Ser Leu Ala Cys Ile Leu Gly Val Leu  
 620 625 630  
 Leu Ala Ser Gly Leu Ile Tyr Cys Leu Arg His Ser Ser Gln His  
 635 640 645  
 Arg Leu Lys Glu Lys Leu Ser Gly Leu Gly Gly Asp Pro Gly Ala  
 650 655 660  
 Asp Ala Thr Ala Ala Tyr Gln Glu Leu Cys Arg Gln Arg Met Ala  
 665 670 675  
 Thr Arg Pro Pro Asp Arg Pro Glu Gly Pro His Thr Ser Arg Ile  
 680 685 690  
 Ser Ser Val Ser Ser Gln Phe Ser Asp Gly Pro Ile Pro Ser Pro  
 695 700 705  
 Ser Ala Arg Ser Ser Ala Ser Ser Trp Ser Glu Glu Pro Val Gln  
 710 715 720  
 Ser Asn Met Asp Ile Ser Thr Gly His Met Ile Leu Ser Tyr Met  
 725 730 735  
 Glu Asp His Leu Lys Asn Lys Asn Arg Leu Glu Lys Glu Trp Glu  
 740 745 750  
 Ala Leu Cys Ala Tyr Gln Ala Glu Pro Asn Ser Ser Phe Val Ala  
 755 760 765  
 Gln Arg Glu Glu Asn Val Pro Lys Asn Arg Ser Leu Ala Val Leu  
 770 775 780  
 Thr Tyr Asp His Ser Arg Val Leu Leu Lys Ala Glu Asn Ser His

785	790	795
Ser His Ser Asp Tyr Ile Asn Ala Ser Pro Ile Met Asp His Asp		
800	805	810
Pro Arg Asn Pro Ala Tyr Ile Ala Thr Gln Gly Pro Leu Pro Ala		
815	820	825
Thr Val Ala Asp Phe Trp Gln Met Val Trp Glu Ser Gly Cys Val		
830	835	840
Val Ile Val Met Leu Thr Pro Leu Ala Glu Asn Gly Val Arg Gln		
845	850	855
Cys Tyr His Tyr Trp Pro Asp Glu Gly Ser Asn Leu Tyr His Ile		
860	865	870
Tyr Glu Val Asn Leu Val Ser Glu His Ile Trp Cys Glu Asp Phe		
875	880	885
Leu Val Arg Ser Phe Tyr Leu Lys Asn Leu Gln Thr Asn Glu Thr		
890	895	900
Arg Thr Val Thr Gln Phe His Phe Leu Ser Trp Tyr Asp Arg Gly		
905	910	915
Val Pro Ser Ser Ser Arg Ser Leu Leu Asp Phe Arg Arg Lys Val		
920	925	930
Asn Lys Cys Tyr Arg Gly Arg Ser Cys Pro Ile Ile Val His Cys		
935	940	945
Ser Asp Gly Ala Gly Arg Ser Gly Thr Tyr Val Leu Ile Asp Met		
950	955	960
Val Leu Asn Lys Met Ala Lys Gly Ala Lys Glu Ile Asp Ile Ala		
965	970	975
Ala Thr Leu Glu His Leu Arg Asp Gln Arg Pro Gly Met Val Gln		
980	985	990
Thr Lys Glu Gln Phe Glu Phe Ala Leu Thr Ala Val Ala Glu Glu		
995	1000	1005
Val Asn Ala Ile Leu Lys Ala Leu Pro Gln		
1010	1015	
<210> 42		
<211> 442		
<212> PRT		
<213> Homo sapien		
<400> 42		
Met Gln Pro Pro Pro Ser Leu Cys Gly Arg Ala Leu Val Ala Leu		
1	5	10
15		
Val Leu Ala Cys Gly Leu Ser Arg Ile Trp Gly Glu Glu Arg Gly		
20	25	30

Phe	Pro	Pro	Asp	Arg	Ala	Thr	Pro	Leu	Leu	Gln	Thr	Ala	Glu	Ile
35								40					45	
Met	Thr	Pro	Pro	Thr	Lys	Thr	Leu	Trp	Pro	Lys	Gly	Ser	Asn	Ala
50								55					60	
Ser	Leu	Ala	Arg	Ser	Leu	Ala	Pro	Ala	Glu	Val	Pro	Lys	Gly	Asp
65								70					75	
Arg	Thr	Ala	Gly	Ser	Pro	Pro	Arg	Thr	Ile	Ser	Pro	Pro	Cys	
80								85					90	
Gln	Gly	Pro	Ile	Glu	Ile	Lys	Glu	Thr	Phe	Lys	Tyr	Ile	Asn	Thr
95								100					105	
Val	Val	Ser	Cys	Leu	Val	Phe	Val	Leu	Gly	Ile	Ile	Gly	Asn	Ser
110								115					120	
Thr	Leu	Leu	Arg	Ile	Ile	Tyr	Lys	Asn	Lys	Cys	Met	Arg	Asn	Gly
125								130					135	
Pro	Asn	Ile	Leu	Ile	Ala	Ser	Leu	Ala	Leu	Gly	Asp	Leu	Leu	His
140								145					150	
Ile	Val	Ile	Asp	Ile	Pro	Ile	Asn	Val	Tyr	Lys	Leu	Leu	Ala	Glu
155								160					165	
Asp	Trp	Pro	Phe	Gly	Ala	Glu	Met	Cys	Lys	Leu	Val	Pro	Phe	Ile
170								175					180	
Gln	Lys	Ala	Ser	Val	Gly	Ile	Thr	Val	Leu	Ser	Leu	Cys	Ala	Leu
185								190					195	
Ser	Ile	Asp	Arg	Tyr	Arg	Ala	Val	Ala	Ser	Trp	Ser	Arg	Ile	Lys
200								205					210	
Gly	Ile	Gly	Val	Pro	Lys	Trp	Thr	Ala	Val	Glu	Ile	Val	Leu	Ile
215								220					225	
Trp	Val	Val	Ser	Val	Val	Leu	Ala	Val	Pro	Glu	Ala	Ile	Gly	Phe
230								235					240	
Asp	Ile	Ile	Thr	Met	Asp	Tyr	Lys	Gly	Ser	Tyr	Leu	Arg	Ile	Cys
245								250					255	
Leu	Leu	His	Pro	Val	Gln	Lys	Thr	Ala	Phe	Met	Gln	Phe	Tyr	Lys
260								265					270	
Thr	Ala	Lys	Asp	Trp	Trp	Leu	Phe	Ser	Phe	Tyr	Phe	Cys	Leu	Pro
275								280					285	
Leu	Ala	Ile	Thr	Ala	Phe	Phe	Tyr	Thr	Leu	Met	Thr	Cys	Glu	Met
290								295					300	
Leu	Arg	Lys	Lys	Ser	Gly	Met	Gln	Ile	Ala	Leu	Asn	Asp	His	Leu
305								310					315	
Lys	Gln	Arg	Arg	Glu	Val	Ala	Lys	Thr	Val	Phe	Cys	Leu	Val	Leu

320

325

330

Val Phe Ala Leu Cys Trp Leu Pro Leu His Leu Ser Arg Ile Leu  
335 340 345

Lys Leu Thr Leu Tyr Asn Gln Asn Asp Pro Asn Arg Cys Glu Leu  
350 355 360

Leu Ser Phe Leu Leu Val Leu Asp Tyr Ile Gly Ile Asn Met Ala  
365 370 375

Ser Leu Asn Ser Cys Ile Asn Pro Ile Ala Leu Tyr Leu Val Ser  
380 385 390

Lys Arg Phe Lys Asn Cys Phe Lys Ser Cys Leu Cys Cys Trp Cys  
395 400 405

Gln Ser Phe Glu Glu Lys Gln Ser Leu Glu Glu Lys Gln Ser Cys  
410 415 420

Leu Lys Phe Lys Ala Asn Asp His Gly Tyr Asp Asn Phe Arg Ser  
425 430 435

Ser Asn Lys Tyr Ser Ser Ser  
440